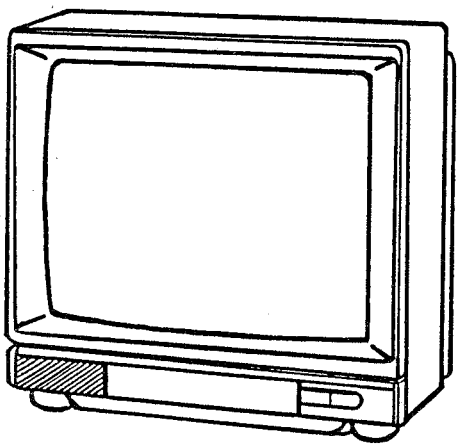
SANYO

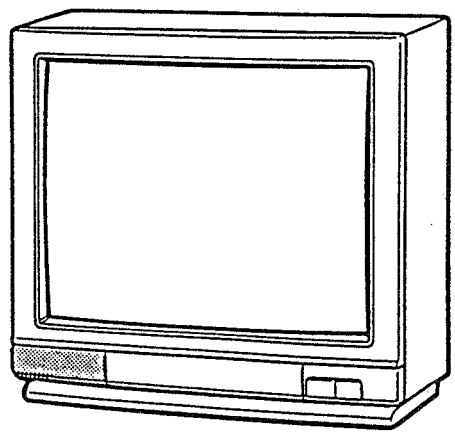
SERVICE MANUAL Colour Television

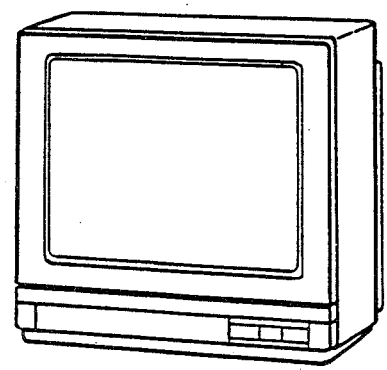
(France)

Model No. CEM2151F
CEM2161F
CEM1761F

Service Ref.No. CEM2151-00
CEM2161-00
CEM1761-00







Specifications

Power Supply	AC 220-240V 50Hz
Television System	L/L',B/G
Colour Reception System	PAL/SECAM
Channel Coverage	System L/L'
	VHF:F2-F10
	CATV:B-Q
	UHF:21-69
	System B/G
	VHF:E2-E12
	CATV:X,Y,Z,S1-S20
	UHF:21-69
Video IF	38.9MHz(B/G),34.47MHz(L')
Sound IF	33.4MHz(B/G),32.4MHz(L),40.97MHz(L')
Aerial Input Impedance	75Ω
Picture Tube	51cm Diagonal, 90 Degree
	(41cm Diagonal, 90 Degree :CEM1761F)
Audio Output	3.0Watts
	(2.0Watts :CEM1761F)
Dimensions	516(W)×472(H)×495(D)mm :CEM2151F
	516(W)×473(H)×495(D)mm :CEM2161F
	429(W)×407(H)×413(D)mm :CEM1761F
Weight	20.5 Kg
	(13.8 Kg :CEM1761F)
Ext. Terminals	CENELEC standard 21 pin RGB terminal

● Specifications subject to change without notice.

PRODUCT CODE

1113 096 02 (CEM2151F-00)
1113 096 00 (CEM2161F-00)
1113 095 00 (CEM1761F-00)

ORIGINAL VERSION

Chassis Series F6-A21/17

Give complete "SERVICE REF.NO." for parts order or servicing, it is shown on the rating label on the TV back cover.

Note

This TV receiver will not work in foreign countries where the televission transmission systeme and power source differ from the design specifications. Refer to the specifications for the design specifications.

SAFETY PRECAUTION

1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.

2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.

3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

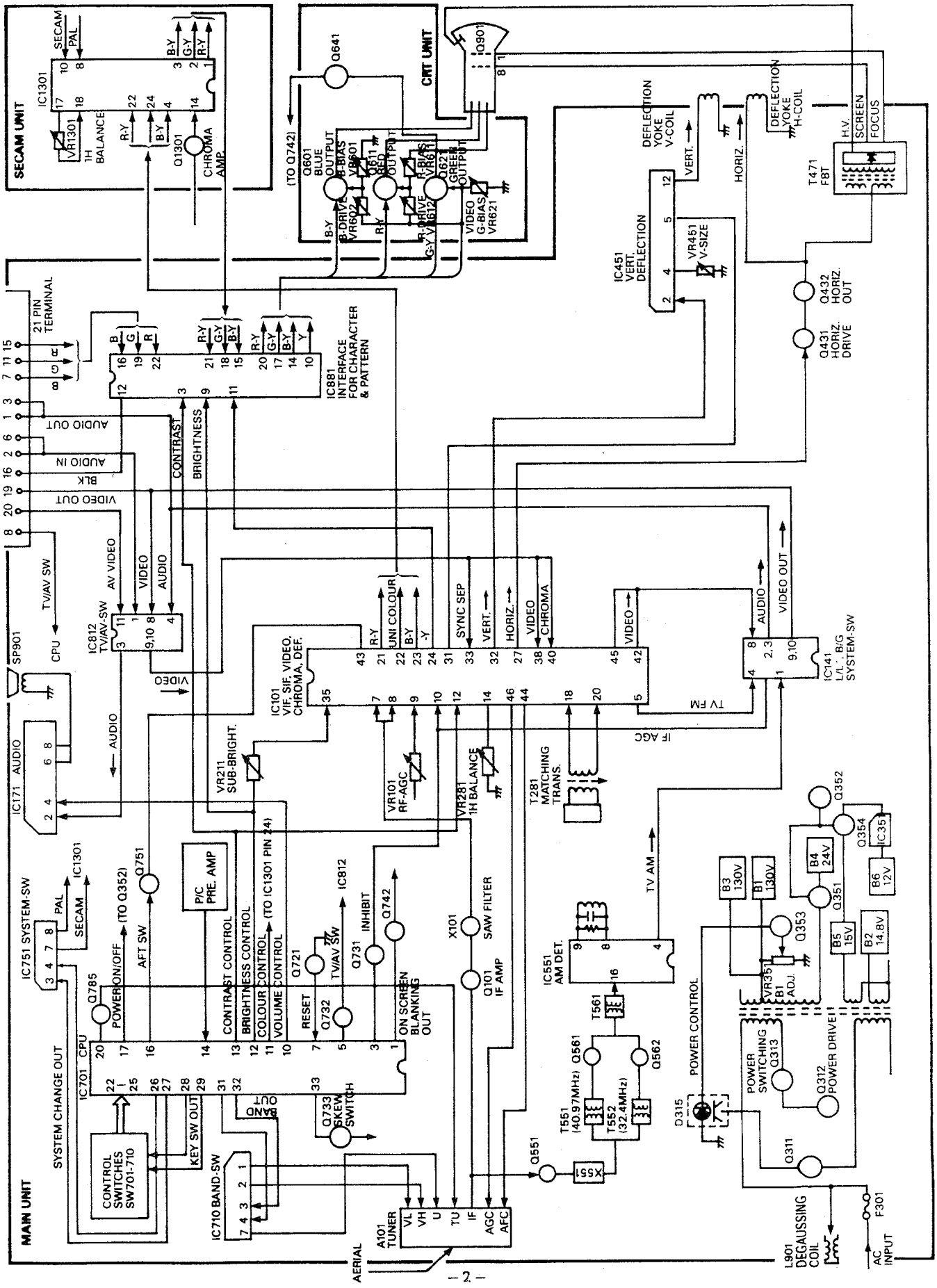
X-RADIATION PRECAUTION

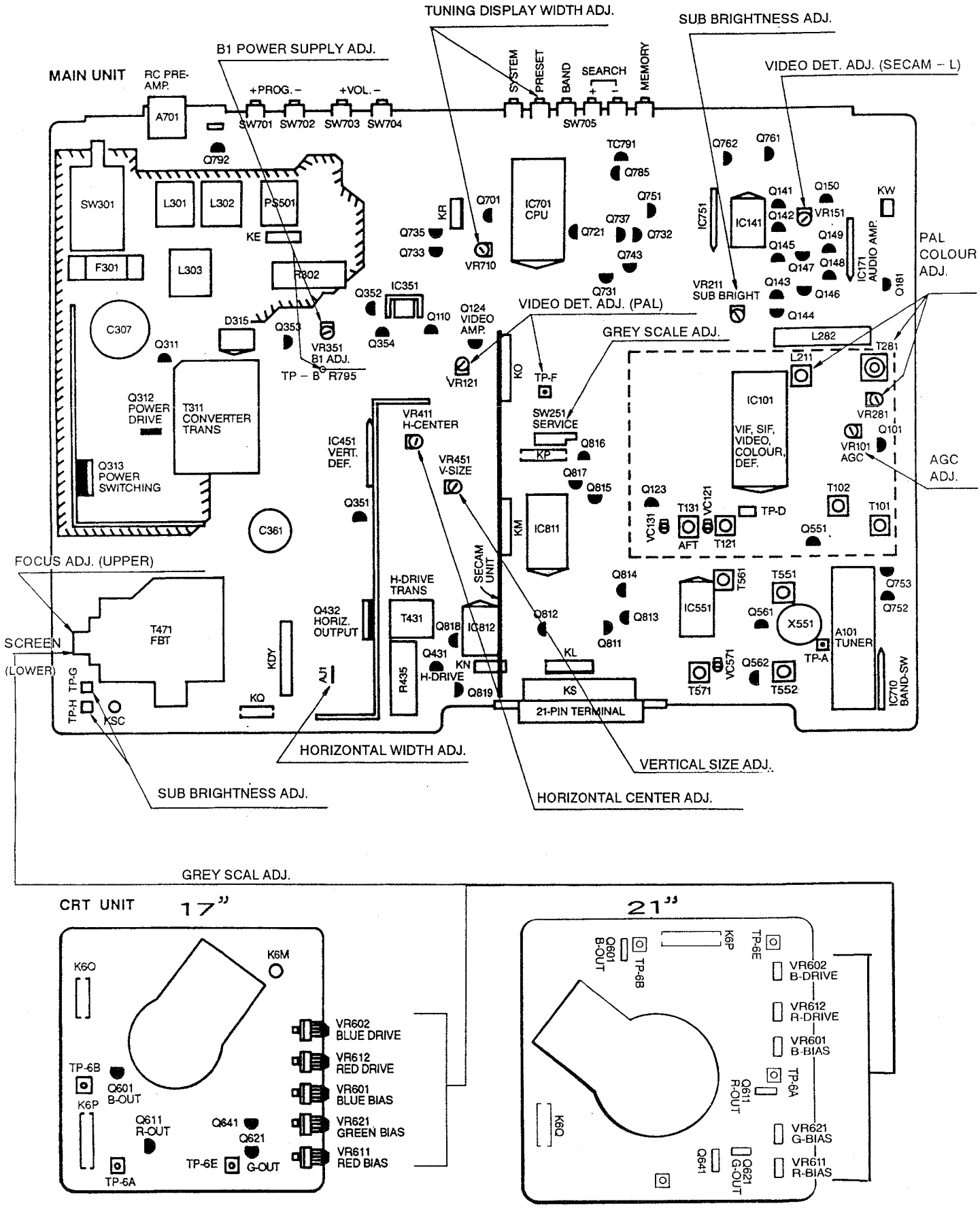
The primary source of X-RADIATION in the television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage adjustment to meintain the high voltage within the specified limits.

PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark ⚠. No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark ⚠.

BLOCK DIAGRAM




TUNING DISPLAY WIDTH ADJ.
SUB BRIGHTNESS ADJ.
B1 POWER SUPPLY ADJ.
VIDEO DET. ADJ. (SECAM – L)
MAIN UNIT
RC PRE-AMP.
+PROG.–
+VOL.–
SYSTEM
PRESET
BAND
SEARCH
MEMORY
A701
SW701 SW702 SW703 SW704
SW705
Q792
TC791
Q785
Q762
Q761
SW301
L301
L302
PS501
KE
F301
L303
R802
KR
Q701
IC701 CPU
Q735
Q733
VR710
Q751
Q737
Q721
Q732
Q743
Q731
IC751
IC141
Q141
Q142
Q150
VR151
KW
Q149
Q145
Q147
Q148
IC171 AUDIO AMP.
Q181
PAL COLOUR ADJ.
VR211 SUB BRIGHT
Q143
Q146
Q144
C307
Q311
D315
Q353
VR351 B1 ADJ.
TP – B
R795
Q352
IC351
Q110
Q354
Q124 VIDEO AMP.
VR121
VIDEO DET. ADJ. (PAL)
GREY SCALE ADJ.
L282
T281
L211
VR281
Q101
VR101 AGC
AGC ADJ.
KO
TP-F
SW251 SERVICE
KP
Q816
Q817
Q815
IC101
VIF, SIF, VIDEO, COLOUR, DEF.
Q312 POWER DRIVE
T311 CONVERTER TRANS
Q313 POWER SWITCHING
VR411 H-CENTER
IC451 VERT. DEF.
VR451 V-SIZE
Q351
C361
KM
IC811
Q123
VC131
T131
AFT
VC121
T121
TP-D
T102
T101
Q551
FOCUS ADJ. (UPPER)
SECAM UNIT
H-DRIVE TRANS
T431
Q818
IC812
Q814
Q813
Q812
Q811
IC551
T561
T551
Q561
X551
TP-A
A101 TUNER
Q753
Q752
IC710 BAND-SW
Q432 HORIZ. OUTPUT
T471 FBT
SCREEN (LOWER)
TP-H
TP-G
KSC
KDY
KQ
AJ1
R435
Q431
H-DRIVE
KN
Q819
KL
KS
21-PIN TERMINAL
T571
VC571
Q562
T552
HORIZONTAL WIDTH ADJ.
VERTICAL SIZE ADJ.
SUB BRIGHTNESS ADJ.
HORIZONTAL CENTER ADJ.
GREY SCAL ADJ.
CRT UNIT
17”
21”
K6O
K6M
TP-6B
Q601 B-OUT
K6P
Q611 R-OUT
Q641
Q621
TP-6E
G-OUT
TP-6A
VR602 BLUE DRIVE
VR612 RED DRIVE
VR601 BLUE BIAS
VR621 GREEN BIAS
VR611 RED BIAS
K6P
TP-6E
Q601 B-OUT
TP-6B
VR602 B-DRIVE
VR612 R-DRIVE
VR601 B-BIAS
TP-6A
Q611 R-OUT
K6Q
VR621 G-BIAS
VR611 R-BIAS
Q941
Q621 G-OUT

SERVICE CONTROL ADJUSTMENTS

AGC ADJUSTMENT

NOTE; Do not attempt this adjustment with weak signal.

① Tune receiver to most clearest station in your area.
Set brightness and contrast to max.
Set colour control to minimum.
② Set the AGC (VR101) to mid-range.
③ Turn AGC control in direction which causes snow to appear, then in the opposite direction until the snow just disappears.

SUB BRIGHTNESS ADJUSTMENT

① Connect a DC meter between "TP-H" (positive lead) and "TP-G" (negative lead) on main unit.
② Receive the circular pattern.
③ Set brightness to maximum and contrast to minimum.
④ Adjust sub brightness control (VR211) for 0.2V.
NOTE; If picture tube replaced, check sub-brightness adjustment.

VERTICAL SIZE ADJUSTMENT

① Tune the receiver to mono-chrome circular pattern.
② Adjust vertical size (VR451) control for full scan.

HORIZONTAL CENTER ADJUSTMENT

① Tune the receiver to mono-chrome circular pattern.
② Set brightness and contrast to maximum.
③ Adjust video phase (VR411) for optimum horizontal center position.

B1 POWER SUPPLY ADJUSTMENT

① Connect DC meter to "TP-B" and GND.
Set the +B1 adjustment (VR351) to mid-range.
② Set brightness and contrast to minimum.
Tune the receiver to an active channel and synchronize picture.
③ Adjust +B1 adjustment control for 130 ± 1.0 V DC.

TUNING DISPLAY WIDTH ADJUSTMENT

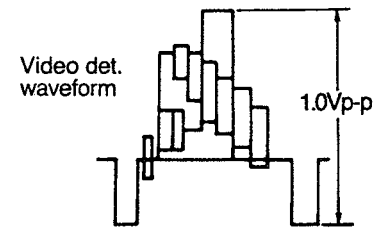
① Tune the receiver to mono-chrome circular pattern.
② Set the preset switch (SW706) to on.
Tuning bar is displayed on screen.
③ Adjust VR710 for optimum the tuning bar width.
Set the preset switch to off.
(The tuning bar disappers.)

VIDEO DET. ADJUSTMENT (PAL)

① Tune receiver to PAL colour bar pattern.
Connect the oscillator to TP-F.
② Adjust VR121 for 1.0 V_{P-P}.

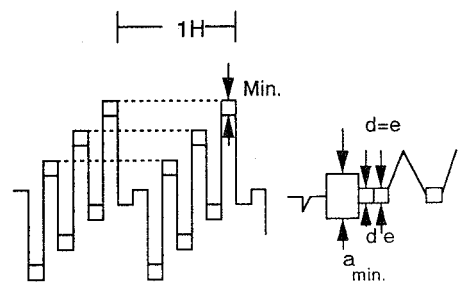
VIDEO DET. ADJUSTMENT (SECAM)

① Tune receiver to SECAM(L/L') colour bar pattern.
Connect the oscillator to TP-F.
② Adjust VR151 for 1.0 V_{P-P}.



COLOUR ADJUSTMENT (PAL)

① Tune receiver to colour bar pattern.
Connect the oscillator to TP-13C of the SECAM unit.
② Set brightness, contrast and colour to maximum.
③ Adjust VR281 and T281 to obtain each 1H waveform for same as shown below.



④ Adjust L211 to obtain proper waveform as shown above.

FOCUS ADJUSTMENT

① Adjust focus control for well scanning lines.

HIGH VOLTAGE CHECK

① Tune the receiver to mono-chrome circular pattern.
② Set brightness and contrast to maximum.
③ Connect a high voltage probe to anode lead at CRT.
④ High voltage must measure between 20~22kV (17")/24~26kV(21").
NOTE; If picture tube replaced, check the high voltage.

HORIZONTAL WIDTH ADJUSTMENT

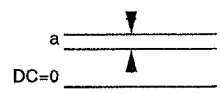
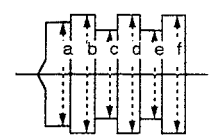
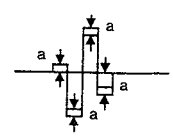
① Tune the receiver to mono-chrome circular pattern.
② Set brightness and contrast to maximum.
③ If the picture is too wide or narrow, cut or short the lead (AJ1) of the Main unit.
When AJ1 is shorted, the horiz. width increase.
When AJ1 is cut, the horiz. width decrease.
NOTE; The horiz. width adjustment affects the high voltage and the sub brightness. Therefore, recheck the sub brightness and the high voltage.

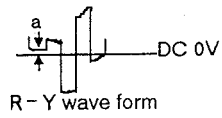
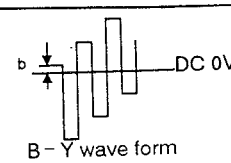
GRAY SCALE AND TRACKING ADJUSTMENT

① Tune the receiver to mono-chrome circular pattern.
② Set brightness and contrast to maximum, the colour to minimum.
③ Set the service switch (SW251) at the service side.
④ Set VR602 and VR612 to be the mechanical center.
⑤ Set VR601, VR611 and VR621 to be the minimum.
⑥ Turn the screen VR for one colour to be just visible.
⑦ Adjust VR601, VR611 and VR621 alternately until a dim white line produced.
⑧ Set the service switch (SW251) at the normal side.
⑨ Adjust VR602 and VR612 alternately to produce normal black and white picture.
⑩ Check for proper grey scale tracking at all brightness levels.
NOTE; If the gray scale adjustment is made after the picture tube replacement, check the high voltage and sub brightness adjustment.

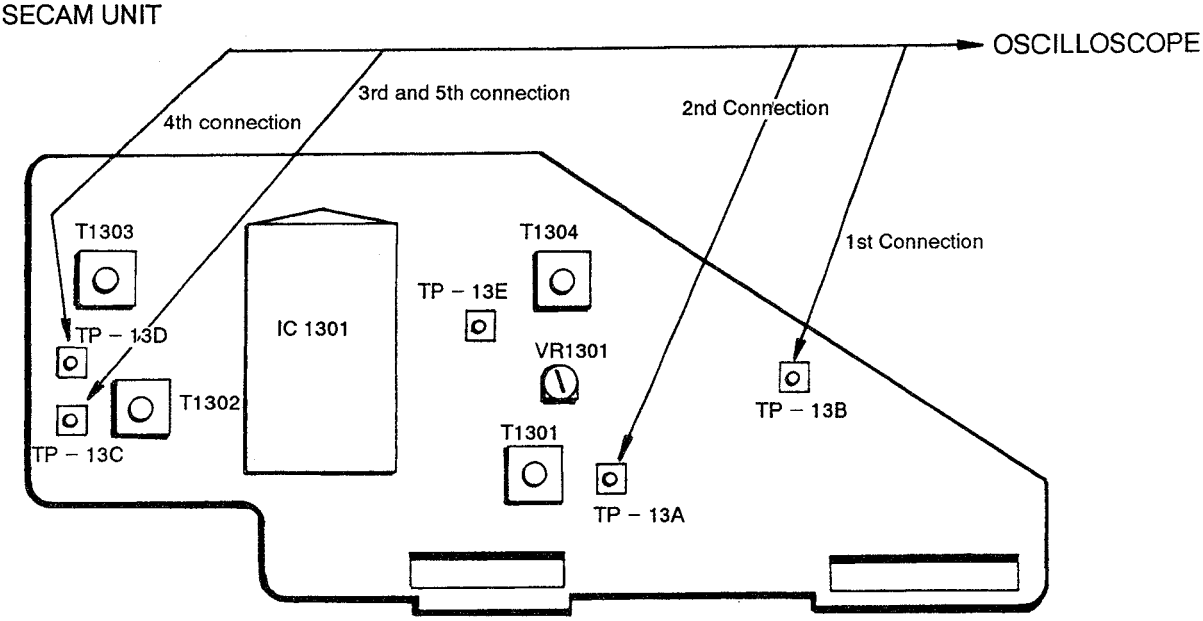
SECAM CHROMA ADJUSTMENT

① Connect the colour bar generator (SECAM signal) to aerial terminal socket.
Set brightness, colour and contrast to maximum.

	Adjust	Remark	Waveform
1	Connect the oscilloscope to TP-13B of the SECAM unit.		
	T1302	Adjust T1302 for minimum DC level and for minimum amplitude at "a" position.	
2	Disconnect the oscilloscope, reconnect the oscilloscope to TP-13A of the SECAM unit.		
	T1301	Adjust T1301 for same amplitude in each colour bar waveform as shown right.	Adjust T1301 c=d=e=f Bell filter adjustment 
3	Disconnect the oscilloscope, reconnect the oscilloscope to TP-13C of the SECAM unit.		
	VR1301	Adjust VR1301 for minimum amplitude at "a" position. NOTE: If VR1301 readjusted, recheck PAL colour adjustment.	

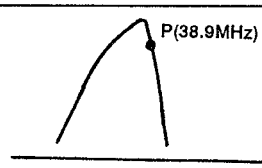
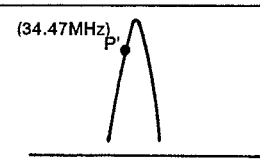
	Adjust	Remark	Waveform
4	Disconnect the oscilloscope, reconnect the oscilloscope to TP-13D of the SECAM unit.		
	T1304	Adjust T1304 for a=0.	 R-Y wave form
5	Disconnect the oscilloscope, reconnect the oscilloscope to TP-13C of the SECAM unit.		
	T1303	Adjust T1303 for b=0.	 B-Y wave form

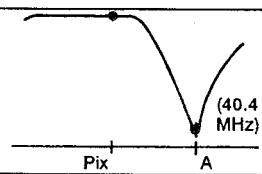
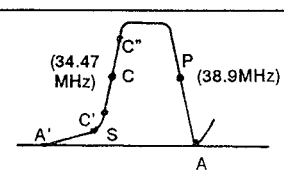
SECAM UNIT

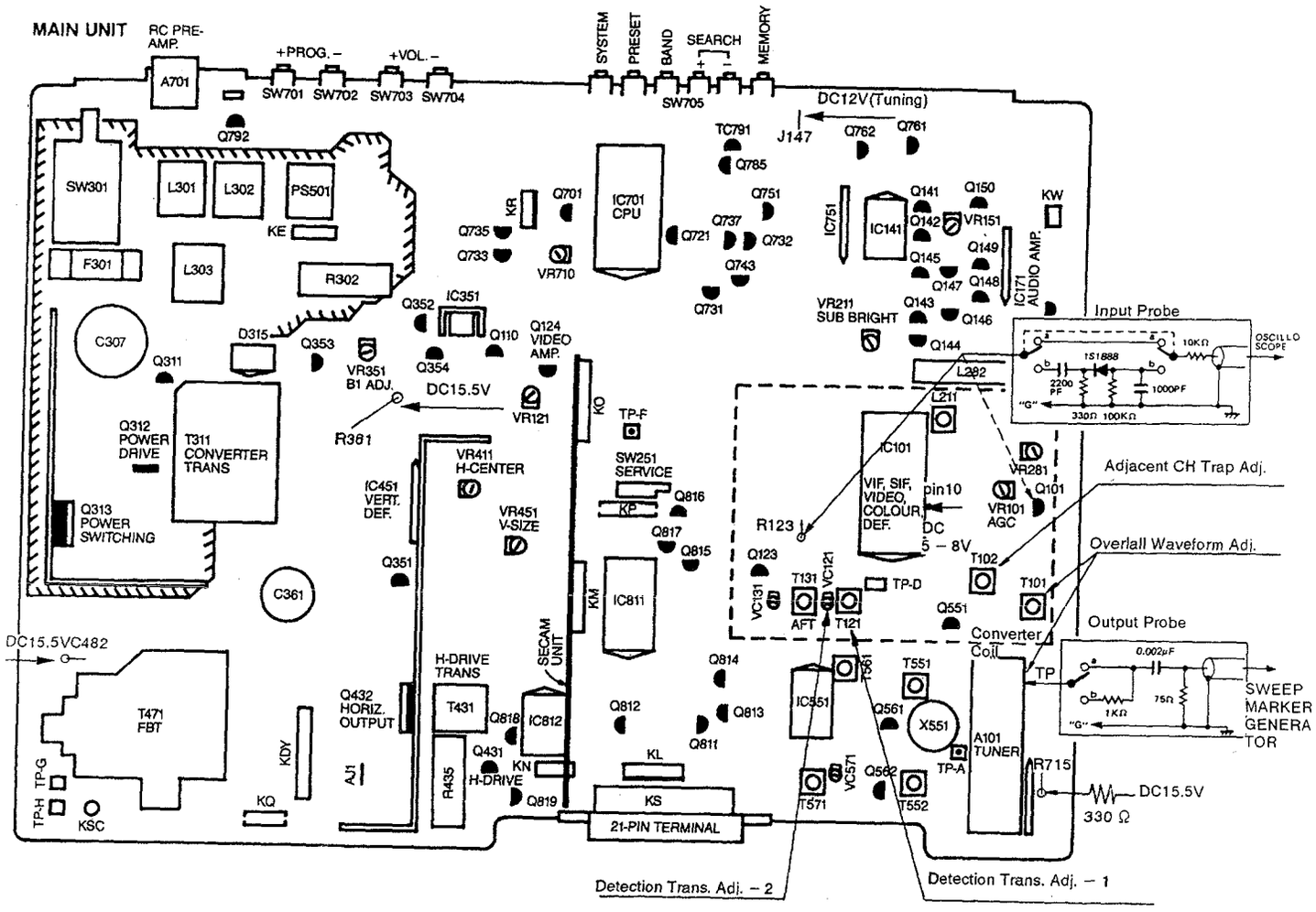


CIRCUIT ALIGNMENT

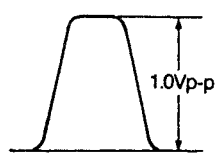
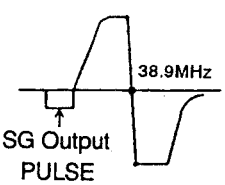
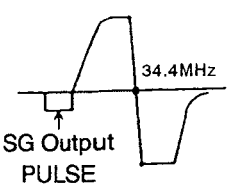
[VIF ALIGNMENT]

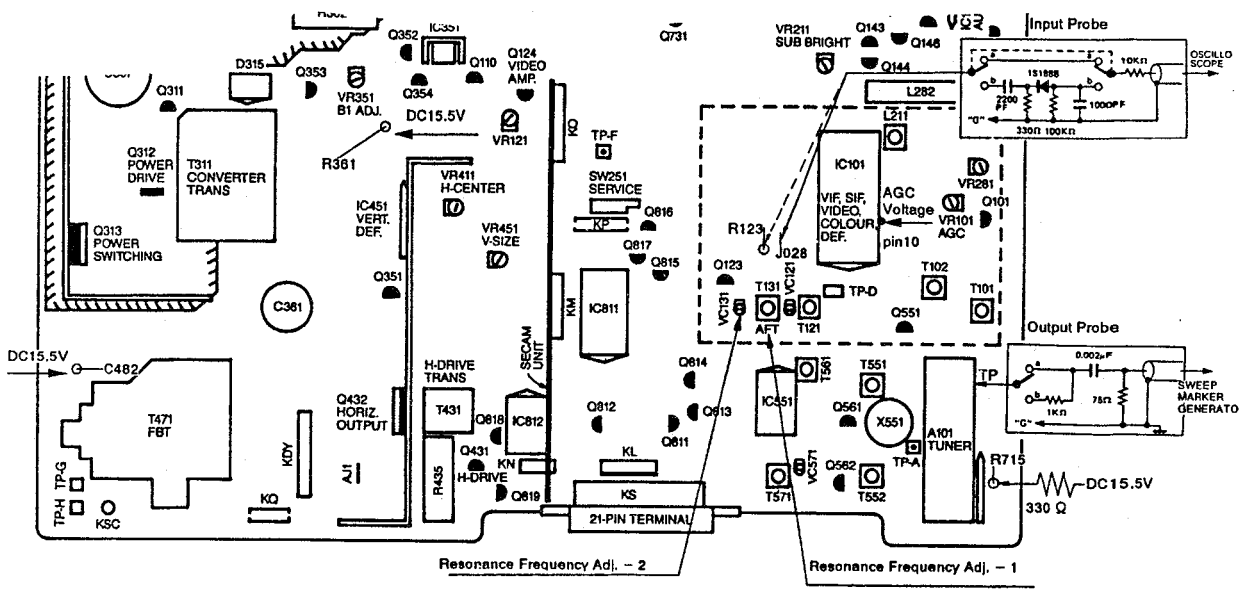
Item		DETECTOR ADJ.1	DETECTOR ADJ.2
SETTING	DC15.5V DC5~8V Output probe Input probe DC12V (Tuning) DC15.5V DC15.5V	R361 IC101-pin10 Tuner TP R123(X121 side) J147 R715(IC710 side) C482(+side)	R361 IC101-pin10 Tuner TP R123(X121 side) J147 R715(IC710 side) C482(+side)
	Output probe Input probe VR101 Oscilloscope Sweep ATT Damping R Channel band System	side-b side-a Clockwise end 100mV/div. 30dB Non. VHF-low B/G	side-b side-a Clockwise end 100mV/div. 30dB Non. VHF-low L/L'
Adjustment		Adjust T121 for maximum 38.9MHz.	Adjust VC121 for maximum 34.47MHz.
VIF waveform			

Item		CH TRAP ADJ.	OVERALL WAVEFORM
SETTING	DC15.5V DC5~8V Output probe Input probe DC12V (Tuning) DC15.5V DC15.5V	R361 IC101-pin10 Tuner TP Q101-Collector J147 R715(IC710 side) C482(+side)	R361 IC101-pin10 Tuner TP R123(X121 side) J147 R715(IC710 side) C482(+side)
	Output probe Input probe VR101 Oscilloscope Sweep ATT Damping R Channel band System	side-a side-b Clockwise end 100mV/div. 20dB Non. VHF-low	side-b side-a Clockwise end 100mV/div. 30dB TP-D → VHF-low B/G
Adjustment		Adjust T102 for minimum 40.4MHz.	1 Adjust Tuner converter coil for P=C. 2 Adjust T101 for symmetrical waveform.
VIF waveform			

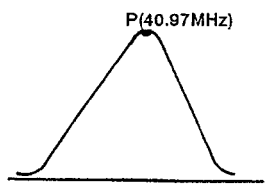
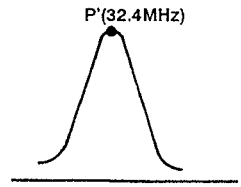

MAIN UNIT
RC PRE-AMP.
A701
+PROG.–
+VOL.–
SW701
SW702
SW703
SW704
SYSTEM
PRESET
BAND
SEARCH
MEMORY
SW705
DC12V(Tuning)
J147
Q792
TC791
Q785
Q762
Q761
SW301
L301
L302
PS501
KE
F301
L303
R302
C307
Q311
D315
Q353
VR351
B1 ADJ.
Q352
IC351
Q110
Q124
VIDEO AMP.
Q354
DC15.5V
VR121
R361
KR
Q701
Q735
Q733
VR710
IC701
CPU
Q721
Q751
Q737
Q732
Q743
Q731
IC751
IC141
Q141
Q142
Q145
Q147
Q150
VR151
Q149
Q148
KW
IC171
AUDIO AMP.
VR211
SUB BRIGHT
Q143
Q146
Q144
L282
L211
Input Probe
OSCILLO SCOPE
10KΩ
1S1888
2200 PF
1000PF
"G"
330Ω 100KΩ
Q312
POWER DRIVE
T311
CONVERTER TRANS
Q313
POWER SWITCHING
C361
VR411
H-CENTER
IC451
VERT. DEF.
VR451
V-SIZE
Q351
KO
TP-F
SW251
SERVICE
KP
Q816
Q817
Q815
IC811
KM
SECAM UNIT
IC101
VIF, SIF, VIDEO, COLOUR, DEF.
pin10
DC 5 – 8V
VR281
Q101
VR101
AGC
Adjacent CH Trap Adj.
R123
Q123
VC131
T131
AFT
VC121
T121
TP-D
T102
T101
Overlall Waveform Adj.
Q551
Converter Coil
Output Probe
0.002μF
TP
75Ω
1KΩ
SWEEP MARKER GENERA - TOR
DC15.5VC482
T471
FBT
Q432
HORIZ. OUTPUT
H-DRIVE TRANS
T431
Q818
IC812
Q431
H-DRIVE
KN
Q819
R435
KL
KS
21-PIN TERMINAL
Q814
Q812
Q813
Q811
IC551
T561
T551
Q561
X551
A101
TUNER
TP-A
R715
DC15.5V
330 Ω
T571
VC571
Q562
T552
KDY
KQ
KSC
TP-H
TP-G
Detection Trans. Adj. – 2
Detection Trans. Adj. – 1

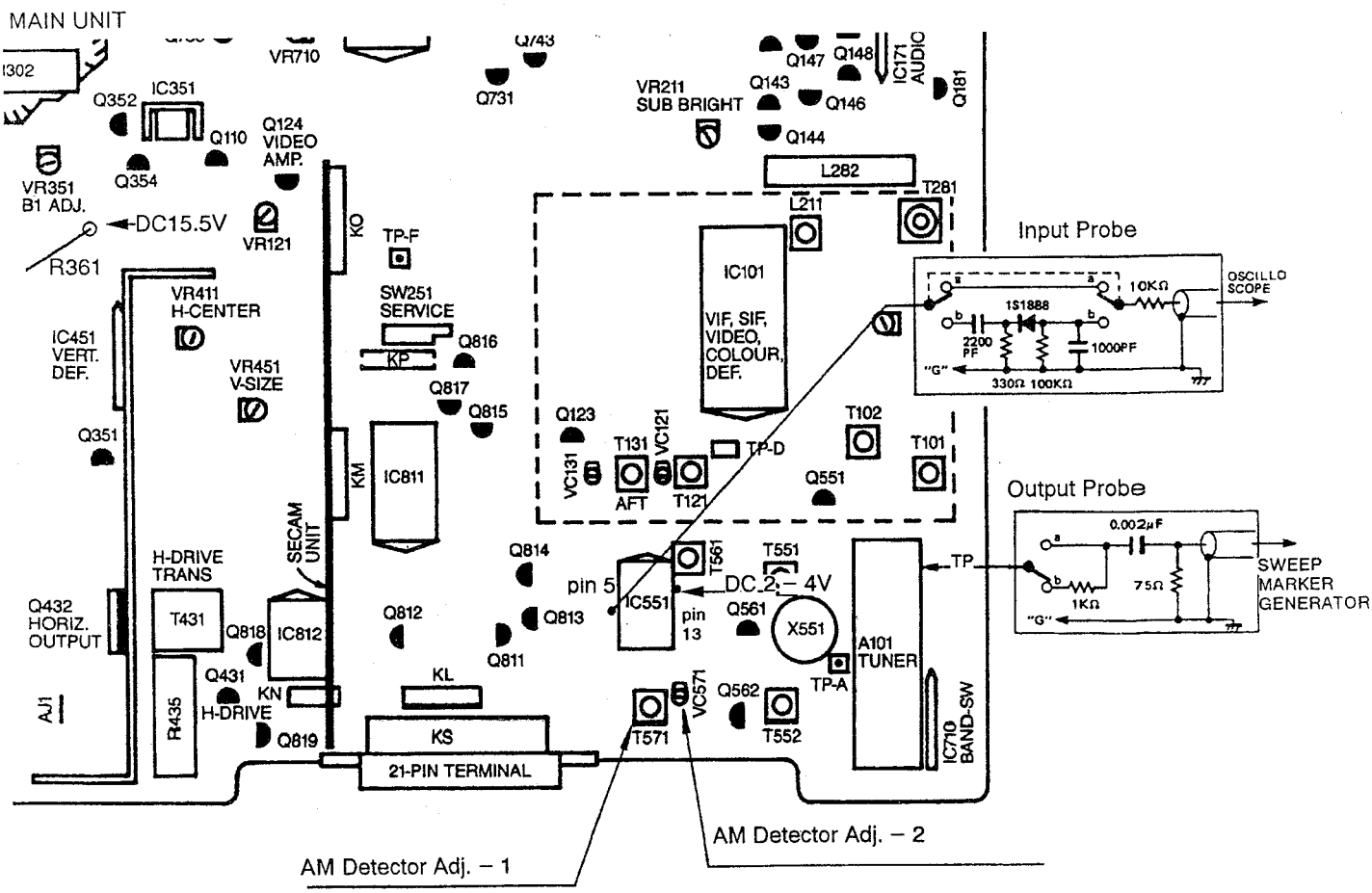
[AFT ALIGNMENT]

Item		AGC Volt Alignment	Resonans F ADJ.1	Resonans F ADJ.2
SETTING	DC15.5V DC5~8V Output probe Input probe DC12V (Tuning) DC15.5V DC15.5V	R361 IC101-pin10 Tuner TP R123(X121 side) R785 R715(IC710 side) C482(+side)	R361 IC101-pin10 Tuner TP R123(X121 side) R785 R715(IC710 side) C482(+side)	R361 IC101-pin10 Tuner TP R123(X121 side) R785 R715(IC710 side) C482(+side)
	Output probe SG Output VR101 Oscilloscope Sweep ATT Damping R Setting band System	side-b NON. Clockwise end 100mV/div. 20dB TP-D(100ohm) VHF-low B/G	side-b 20mVrms(ATT20dB) Clockwise end 1V/div. 20dB Non. VHF-low B/G	side-b 20mVrms(ATT20dB) Clockwise end 1V/div. 20dB Non. VHF-low L/L'
Adjustment		Fix the AGC voltage when the overall waveform level is adjusted at 1.0Vpp.	Keep AGC voltage which is adjusted at AGC volt-alignment, and adjust T131 for 38.9MHz marker is just on the reference line.	Adjust VC131 for 34.47MHz marker is just on the reference line. Then confirm the Resonance F Adj. 1.
AFT Waveform				



[AM Detector Adjustment]

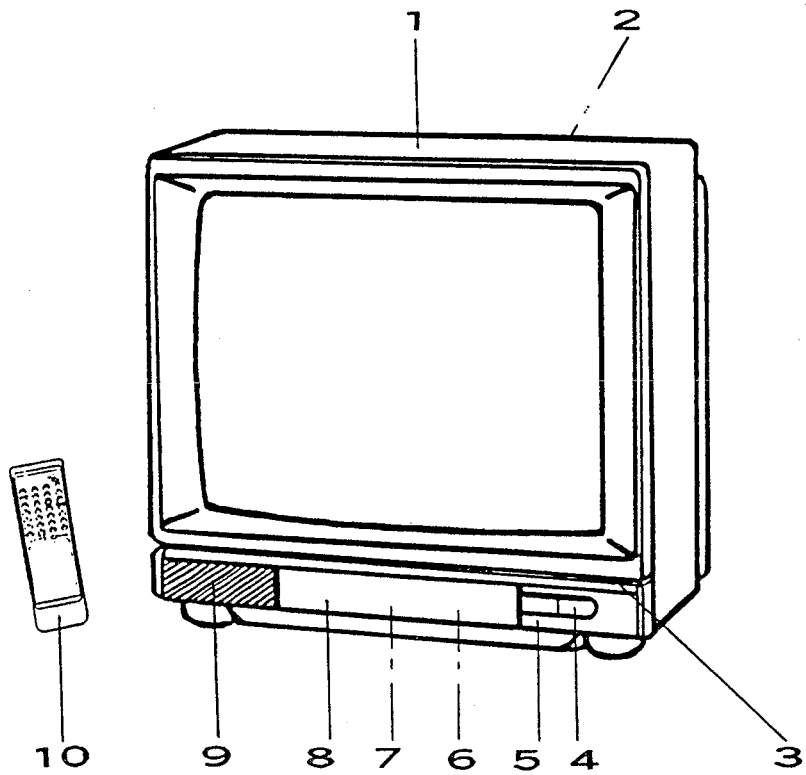
Item		AM Detector Adj.1	AM Detector Adj.1
SETTING	DC15.5V DC2~4V Output probe Input probe (a-side)	R361 IC551-pin13 Tuner TP IC551-pin5	R361 IC551-pin13 Tuner TP IC551-pin5
	Output probe Oscilloscope Sweep ATT Setting band System	side-b 100mV/div. 30dB VHF-low L/L'	side-b 100mV/div. 30dB UHF L/L'
Adjustment		Adjust T571 for maximum 40.97MHz.	Adjust VC571 for maximum 32.4MHz.
Waveform			



CABINET PARTS LIST

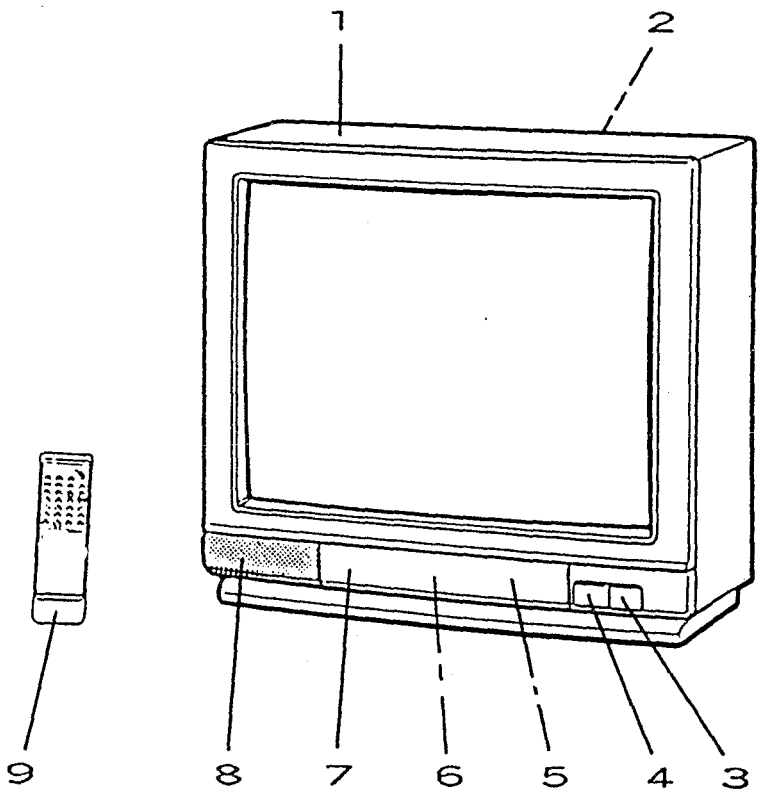
Note: Parts order must contain service reference No., key No., part No. and description.

1.CEM2151F

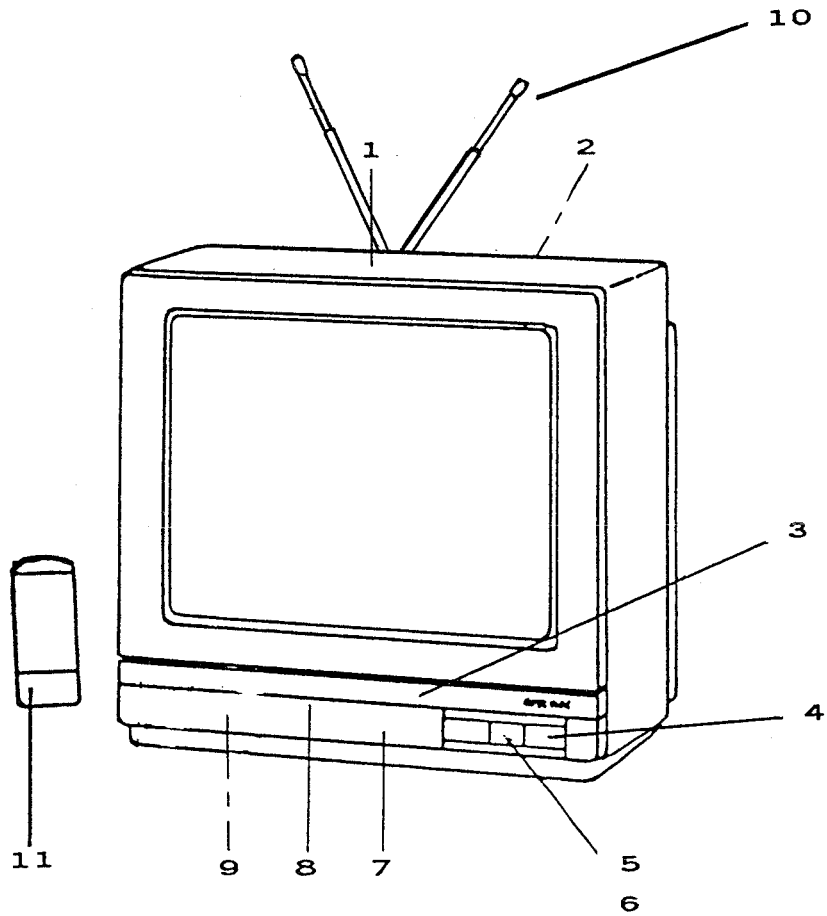


Key No.	Part No.	Description
1.	610 216 1137	Cabinet Ass'y
2.	610 214 9814	Cabinet back
3.	610 214 9852	Decoration sash
4.	610 228 5130	Button: Main SW
	610 210 7302	Spring
5.	610 214 9838	Indicator plate
6.	610 231 4953	Control decoration plate
7.	610 104 2505	Push latch
8.	610 233 4470	Door
9.	610 214 9739	Speaker grille
10.	610 231 8395	Remote Control Unit (JXLB)

2. CEM2161F



Key No.	Part No.	Description
1.	610 229 2572	Cabinet Ass'y
2.	610 214 9814	Cabinet back
3.	610 229 2589	Button: Main SW
	610 210 7302	Spring
4.	610 229 2602	Indicator plate
5.	610 232 1340	Control decoration plate
6.	610 104 2505	Push latch
7.	610 231 5066	Door
8.	610 229 2633	Speaker grille
9.	610 231 8395	Remote Control Unit (JXLB)



Key No.	Part No.	Description
1.	610 225 9667	Cabinet Ass'y
2.	610 225 2927	Cabinet back
3.	610 226 3961	Decoration panel
4.	610 233 3947	Indicator panel
5.	610 223 5340	Button: Main SW
6.	610 210 7302	Spring
7.	610 231 6759	Door
8.	610 104 2505	Push latch
9.	610 231 4953	Control decoration plate
10.	610 217 1006	Telescopic Aerial Ass'y
	610 229 4620	Aerial matching box
11.	610 231 8395	Remote Control Unit (JXLB)

CPU REPLACEMENT: IMPORTANT NOTE

When IC701 (M34300N4-624SP) is replaced, it is necessary to make the initialize of IC1701 as following procedure.

(1) Switch off the TV set.
(2) Replace IC1701.
(3) Switch on the TV set.
(4) Select programme position "1" directly with the remote control transmitter.
(5) Press and hold the SPECIAL key (of the remote control transmitter) for more than 2.5 seconds, and input SPECIAL CODE "01" using the programme selector of the remote control transmitter.
(6) Press the MEMORY button of the TV set.

Remarks: If there is mistaking the procedure, switch off the TV set and repeat steps (3) to (6).

The initialize is now completed.

Next, operate the pre-setting of the stations to allocate the TV channels.
Refer to the instruction manual of this TV set.

CHASSIS ELECTRICAL PARTS LIST CEM2151F/CEM2161F

Rroduct safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a ⚠ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

Note: Part order must contain Service Ref. No. , Part Ref. No. , Part No. ,and descriptions. The main PCB unit will be supplied without tuner and flyback transformer. They should be ordered separately.

Ref. No.	Part No.	Description

Read description in the Capacitor and Resister as follows:

CAPACITOR

CERAMIC 100P K 50V

- 50V — Rated Voltage
- K — Tolerance Symbols:

Less than 10PF

A: Not specified	B: ± 0.1PF	C: ± 0.25PF
D: ± 0.5PF	F: ± 1PF	G: ± 2PF
R: +0.25-0PF	S: +0-0.25PF	E: +0-1PF

Moer than 10PF

A: Not specified	B: ± 0.1%	C: ± 0.25%
D: ± 0.5%	F: ± 1%	G: ± 2%
H: ± 3%	J : ± 5%	K: ± 10%
L : ± 15%	M: ± 20%	N: ± 30%
P: +100-0%	Q: +30-10%	T: +50-10%
U: +75-10%	V: +20-10%	W: +100-10%
X: +40-20%	Y: +150-10%	Z: +80-20%

- 100P — Rated value:P=pico farad,U=Micro farad

Material :

CERAMIC.....Ceramic
MT-PAPER.....Metallised Paper
POLYESTER.....Polyester
MT-POLYEST.....Metallized Polyester
POLYPRO.....Polypropylene
MT-POLYPRO.....Metallized Polypropylene
COMPO FILM.....Composite film
MT-COMPO.....Metallized Copmposite
STYRENE.....Styrene
TA-SOLID.....Tantalum Solid
AL-SOLID.....Aluminium Solid
ELECT.....Electrolytic
NP-ELECT.....Non-polarized Electrolytic
OS-SOLID.....Aluminium Solid with Organic Semiconductive Electrolytic
DL-ELECT.....Doble Layered Electrolytic

RESISTER

CARBON 4.7K J A 1/4W

- 1/4W — Rated Wattage
- A — *Performance Symbols:* A:General B:Non flammable Z:Low noise Other :Temperature coefficient
- J — Tolerance Symbols: A: ± 0.05% B: ± 0.1% C: ± 0.25% D: ± 0.5% F: ± 1% G: ± 2% J: ± 5% K: ± 10% M: ± 20% P:+5-15%
- 4.7K — Rated value, ohms: K:1,000, M:1,000,000

Material :

CARBON .....Carbon
MT-FILM.....Metal Film
OXIDE-MT .....Oxide Metal Film
SOLID .....Composition
MT-GLAZE .....Metal Glaze
WIRE WOUND .....Wire Wound
CERAMIC RES.....Ceramic
FUSIBLE RES .....Fusible

Ref. No.	Part No.	Description
610 231 3208	MAIN PCB ASSU E4WA	UE2422
TRANSISTER		
Q101	405 014 9207	TR 2SC2570A
Q110	405 023 4903	TR 2SD400-D-MP
	405 023 5009	TR 2SD400-E-MP
	405 023 5306	TR 2SD400-F-MP
Q123	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q124	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q141	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA

Ref. No.	Part No.	Description
Q142	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q143	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q144	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q145	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q146	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q147	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q148	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q149	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q150	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q181	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q311	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)

Ref. No.	Part No.	Description
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q312	405 058 0208	TR 2SC3807-R-CTV-YA
Q313	405 022 8506	TR 2SD1710-CTV-YB
Q353	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q431	405 014 2406	TR 2SC2383-O(SAN)
	405 014 2505	TR 2SC2383-R(SAN)
Q432	405 022 6809	TR 2SD1651-CTV-YB
Q481	405 013 6801	TR 2SC2274-E
	405 013 7006	TR 2SC2274-F
Q551	405 013 3305	TR 2SC2216(SAN)
Q561	405 016 0806	TR 2SC2839-E
	405 016 1001	TR 2SC2839-F
Q562	405 016 0806	TR 2SC2839-E
	405 016 1001	TR 2SC2839-F
Q701	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q711	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q721	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R

Ref.No.	Part No.	Description
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q731	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q732	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q733	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q735	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q737	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O

Ref. No.	Part No.	Description
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q742	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q743	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q751	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q752	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q753	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S

Ref.No.	Part No.	Description
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q761	405 039 3303	TR 2SC3114-R
	405 039 3402	TR 2SC3114-S
	405 017 1901	TR 2SC3114-T
	405 017 2106	TR 2SC3114-U
Q762	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q785	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q792	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q811	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP

Ref. No.	Part No.	Description
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q812	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q813	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q815	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q816	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
Q817	405 013 3305	TR 2SC2216(SAN)
Q818	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q819	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S

Ref.No.	Part No.	Description
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
INTEGRATED CIRCUIT		
IC101	409 185 0308	IC LA7681
IC141	409 020 8704	IC LC4066B
	409 030 5809	IC MC14066B
	409 207 1900	IC MLC4066B
	409 051 3501	IC TC4066BP
IC171	409 073 1509	IC AN5265
IC351	409 077 4803	IC L7812-RA
IC451	409 173 2703	IC LA7837
IC551	409 082 7202	IC LA7710
IC701	410 081 5007	IC M34300N4-624SP
IC710	409 019 6209	IC LA7910
IC751	409 019 6209	IC LA7910
IC791	409 013 0104	IC HZT33
	409 026 8005	IC L5630
	409 057 5103	IC UPC574J
IC811	409 000 9202	IC AN5352
IC812	409 020 8704	IC LC4066B
	409 030 5809	IC MC14066B
	409 207 1900	IC MLC4066B
	409 051 3501	IC TC4066BP
CAPACITOR		
C100	403 069 8305	CERAMIC 0.01U Z 50V
C101	403 043 9106	ELECT 47U M 16V
C102	403 046 9905	ELECT 4.7U M 25V
C103	403 046 9905	ELECT 4.7U M 25V
C104	403 046 9905	ELECT 4.7U M 25V
C105	403 048 6308	ELECT 0.47U M 50V
C106	403 011 3808	CERAMIC 120P J 50V
C107	403 009 3407	CERAMIC 100P J 50V
C108	403 024 0009	CERAMIC 39P J 50V
C109	403 069 8305	CERAMIC 0.01U Z 50V
C110	403 024 9705	CERAMIC 4P C 50V
C111	403 069 8305	CERAMIC 0.01U Z 50V
C112	403 069 8305	CERAMIC 0.01U Z 50V
C113	403 056 9506	POLYESTER 0.01U J 50V
	403 057 0205	POLYESTER 0.01U J 50V
C114	403 042 7707	ELECT 22U M 16V
C115	403 048 6308	ELECT 0.47U M 50V
C116	403 059 5901	POLYESTER 0.022U K 50V
	403 059 6700	POLYESTER 0.022U K 50V
C117	403 043 6006	ELECT 330U M 16V
C118	403 024 9705	CERAMIC 4P C 50V
C119	403 069 8305	CERAMIC 0.01U Z 50V
C120	403 049 0008	ELECT 1U M 50V
C121	403 026 0700	CERAMIC 47P J 50V
C122	403 069 8305	CERAMIC 0.01U Z 50V
C123	403 069 8305	CERAMIC 0.01U Z 50V
C130	403 069 8305	CERAMIC 0.01U Z 50V
C131	403 033 3503	CERAMIC 82P J 50V
C132	403 022 5907	CERAMIC 33P J 50V
C133	403 069 0507	CERAMIC 1000P K 50V
C134	403 069 8305	CERAMIC 0.01U Z 50V
C135	403 166 7706	MT-POLYEST 0.47U J 63V
	403 067 7805	MT-COMPO 0.47U J 50V
C136	403 017 7404	CERAMIC 22P J 50V
C141	403 022 6300	CERAMIC 33P J 50V
C142	403 069 0507	CERAMIC 1000P K 50V
C143	403 009 3407	CERAMIC 100P J 50V

Ref. No.	Part No.	Description		
C144	403 017 7602	CERAMIC	22P J	50V
C145	403 049 0008	ELECT	1U M	50V
C146	403 069 8305	CERAMIC	0.01U Z	50V
C151	403 062 5103	POLYESTER	5600P K	50V
	403 062 5707	POLYESTER	5600P K	50V
C155	403 069 8305	CERAMIC	0.01U Z	50V
C161	403 069 8305	CERAMIC	0.01U Z	50V
C162	403 041 8804	ELECT	10U M	16V
C163	403 041 8804	ELECT	10U M	16V
C164	403 069 8305	CERAMIC	0.01U Z	50V
C171	403 042 2405	ELECT	100U M	16V
C172	403 041 8804	ELECT	10U M	16V
C181	403 044 9501	ELECT	100U M	25V
C182	403 041 8804	ELECT	10U M	16V
C183	403 041 8804	ELECT	10U M	16V
C184	403 166 7706	MT-POLYEST	0.47U J	63V
	403 067 7805	MT-COMPO	0.47U J	50V
C185	403 047 5005	ELECT	470U M	25V
C186	403 069 8305	CERAMIC	0.01U Z	50V
C187	403 042 7707	ELECT	22U M	16V
C188	403 049 9803	ELECT	2.2U M	50V
C201	403 041 8804	ELECT	10U M	16V
C202	403 019 7709	CERAMIC	27P J	50V
C203	403 069 8305	CERAMIC	0.01U Z	50V
C205	403 070 4600	CERAMIC	1200P K	50V
C211	403 049 9803	ELECT	2.2U M	50V
C221	403 069 8305	CERAMIC	0.01U Z	50V
C222	403 042 2405	ELECT	100U M	16V
C231	403 085 7306	NP-ELECT	10U M	25V
C232	403 048 6308	ELECT	0.47U M	50V
C233	403 046 9905	ELECT	4.7U M	25V
C234	403 086 2607	NP-ELECT	1U M	50V
C235	403 011 3808	CERAMIC	120P J	50V
C251	403 030 5401	CERAMIC	68P J	50V
C252	403 026 1103	CERAMIC	47P J	50V
C253	403 069 8305	CERAMIC	0.01U Z	50V
C255	403 069 8305	CERAMIC	0.01U Z	50V
C261	403 069 8305	CERAMIC	0.01U Z	50V
C262	403 086 2607	NP-ELECT	1U M	50V
C263	403 069 8305	CERAMIC	0.01U Z	50V
C264	403 069 8305	CERAMIC	0.01U Z	50V
C265	403 048 6308	ELECT	0.47U M	50V
C271	403 057 0403	POLYESTER	0.01U K	50V
	403 057 1004	POLYESTER	0.01U K	50V
C272	403 069 8305	CERAMIC	0.01U Z	50V
C282	403 013 1901	CERAMIC	150P J	50V
C283	403 069 8305	CERAMIC	0.01U Z	50V
C284	403 069 8305	CERAMIC	0.01U Z	50V
C285	403 069 8305	CERAMIC	0.01U Z	50V
C286	403 017 7701	CERAMIC	22P J	50V
C290	403 148 0305	ELECT	470U M	16V
⚠C301	404 007 9903	MT-COMPO	0.1U M	250V
⚠C302	404 007 9903	MT-COMPO	0.1U M	250V
C303	403 076 9203	CERAMIC	2200P M	1K
C304	403 076 9203	CERAMIC	2200P M	1K
C305	403 076 9203	CERAMIC	2200P M	1K
C306	403 076 9203	CERAMIC	2200P M	1K
C307	404 038 1600	ELECT	100U M	400V
C313	403 061 8105	POLYESTER	4700P K	50V
	403 061 8808	POLYESTER	4700P K	50V
C314	403 057 2803	POLYESTER	0.1U K	50V
	403 057 3701	POLYESTER	0.1U K	50V
C315	403 058 2406	POLYESTER	0.015U J	50V
	403 058 3007	POLYESTER	0.015U J	50V
C316	403 165 8407	CERAMIC	680P K	2K
	403 077 9103	CERAMIC	680P K	2K
C317	403 060 8205	POLYESTER	0.033U K	50V
	403 060 8809	POLYESTER	0.033U K	50V
C318	403 165 6007	CERAMIC	1000P K	1K
	403 112 5800	CERAMIC	1000P K	1K

Ref.No.	Part No.	Description		
⚠C331	404 008 4105	CERAMIC	2200P M	400V
⚠C334	404 008 3108	CERAMIC	470P M	400V
C351	403 165 8605	CERAMIC	470P K	2K
	403 077 7901	CERAMIC	470P K	2K
C352	403 167 8603	CERAMIC	220P K	2K
	403 077 5105	CERAMIC	220P K	2K
C362	403 055 8401	ELECT	22U M	250V
C363	403 053 6904	ELECT	330U M	35V
C364	403 148 0404	ELECT	1000U M	25V
C365	403 119 8002	ELECT	470U M	25V
C371	403 047 5005	ELECT	470U M	25V
C401	403 049 9803	ELECT	2.2U M	50V
C402	403 071 2407	CERAMIC	1800P K	50V
C411	403 075 4209	CERAMIC	820P K	50V
C421	403 042 2405	ELECT	100U M	16V
C422	403 060 8205	POLYESTER	0.033U K	50V
	403 060 8809	POLYESTER	0.033U K	50V
C423	403 051 0607	ELECT	4.7U M	50V
C424	403 062 6902	POLYESTER	0.056U K	50V
	403 062 7404	POLYESTER	0.056U K	50V
C425	403 048 6308	ELECT	0.47U M	50V
C431	403 062 6902	POLYESTER	0.056U K	50V
	403 062 7404	POLYESTER	0.056U K	50V
C432	403 075 7101	CERAMIC	1000P K	500V
C433	403 076 3102	CERAMIC	3900P K	500V
C434	403 054 0703	ELECT	47U M	35V
C435	404 030 5408	MT-POLYPRO	6500P J	1.5K
	404 030 5507	MT-POLYPRO	6500P J	1.5K
C436	403 165 7707	CERAMIC	220P J	3K
	403 078 2608	CERAMIC	220P J	3K
C437	403 062 2201	POLYESTER	0.47U K	50V
C441	403 082 7408	POLYPRO	0.15U J	200V
C442	403 082 7804	POLYPRO	0.18U J	200V
C443	403 055 3802	ELECT	4.7U M	160V
C445	403 049 0008	ELECT	1U M	50V
C451	403 148 0305	ELECT	470U M	16V
C452	403 053 3606	ELECT	2200U M	35V
C453	403 071 5606	CERAMIC	220P K	50V
C454	403 057 0403	POLYESTER	0.01U K	50V
	403 057 1004	POLYESTER	0.01U K	50V
C455	403 091 9004	TA-SOLID	1U K	25V
C456	403 052 7308	ELECT	100U M	35V
C458	403 034 8804	CERAMIC	10P D	500V
C459	403 064 1301	POLYESTER	0.1U K	100V
C461	403 051 0607	ELECT	4.7U M	50V
C462	403 045 1504	ELECT	1000U M	25V
C463	403 064 6207	POLYESTER	0.033U K	100V
C482	403 043 0202	ELECT	220U M	16V
C492	403 057 0403	POLYESTER	0.01U K	50V
	403 057 1004	POLYESTER	0.01U K	50V
C493	403 046 1602	ELECT	3.3U M	25V
C550	403 069 8305	CERAMIC	0.01U Z	50V
C551	403 069 8305	CERAMIC	0.01U Z	50V
C552	403 069 8305	CERAMIC	0.01U Z	50V
C553	403 069 8305	CERAMIC	0.01U Z	50V
C554	403 024 0009	CERAMIC	39P J	50V
C556	403 069 8305	CERAMIC	0.01U Z	50V
C557	403 069 8305	CERAMIC	0.01U Z	50V
C558	403 069 8305	CERAMIC	0.01U Z	50V
C559	403 069 8305	CERAMIC	0.01U Z	50V
C560	403 069 8305	CERAMIC	0.01U Z	50V
C561	403 069 8305	CERAMIC	0.01U Z	50V
C562	403 069 8305	CERAMIC	0.01U Z	50V
C563	403 069 8305	CERAMIC	0.01U Z	50V
C564	403 069 8305	CERAMIC	0.01U Z	50V
C565	403 041 8804	ELECT	10U M	16V
C566	403 042 7707	ELECT	22U M	16V
C567	403 069 8305	CERAMIC	0.01U Z	50V
C568	403 042 2405	ELECT	100U M	16V
C569	403 061 8105	POLYESTER	4700P K	50V

Ref. No.	Part No.	Description
	403 061 8808	POLYESTER 4700P K 50V
C570	403 046 1602	ELECT 3.3U M 25V
C571	403 026 0700	CERAMIC 47P J 50V
C572	403 069 8305	CERAMIC 0.01U Z 50V
C573	403 041 8804	ELECT 10U M 16V
C574	403 069 8305	CERAMIC 0.01U Z 50V
C576	403 041 8804	ELECT 10U M 16V
C577	403 069 8305	CERAMIC 0.01U Z 50V
C700	403 038 3409	ELECT 1000U M 6.3V
C701	403 038 3409	ELECT 1000U M 6.3V
C702	403 057 2803	POLYESTER 0.1U K 50V
C704	403 069 8305	CERAMIC 0.01U Z 50V
C707	403 069 8305	CERAMIC 0.01U Z 50V
C708	403 068 9006	CERAMIC 100P K 50V
C709	403 069 0507	CERAMIC 1000P K 50V
C710	403 056 7106	POLYESTER 1000P J 50V
	403 056 7700	POLYESTER 1000P J 50V
C711	403 072 7708	CERAMIC 330P K 50V
C712	403 072 7708	CERAMIC 330P K 50V
C713	403 072 7708	CERAMIC 330P K 50V
C714	403 012 4002	CERAMIC 15P J 50V
C715	403 017 7404	CERAMIC 22P J 50V
C731	403 062 0306	POLYESTER 0.047U K 50V
C741	403 069 8305	CERAMIC 0.01U Z 50V
C751	403 049 9803	ELECT 2.2U M 50V
C752	403 049 9803	ELECT 2.2U M 50V
C760	403 046 1602	ELECT 3.3U M 25V
C761	403 030 5104	CERAMIC 68P J 50V
C762	403 041 8804	ELECT 10U M 16V
C763	403 033 3305	CERAMIC 82P J 50V
C764	403 041 8804	ELECT 10U M 16V
C766	403 041 8804	ELECT 10U M 16V
C767	403 019 7402	CERAMIC 27P J 50V
C782	403 048 6308	ELECT 0.47U M 50V
C783	403 048 6308	ELECT 0.47U M 50V
C785	403 051 0607	ELECT 4.7U M 50V
C789	403 071 1707	CERAMIC 180P K 50V
C790	403 073 6403	CERAMIC 470P K 50V
C811	403 041 8804	ELECT 10U M 16V
C812	403 041 8804	ELECT 10U M 16V
C813	403 041 8804	ELECT 10U M 16V
C814	403 042 2405	ELECT 100U M 16V
C815	403 069 8305	CERAMIC 0.01U Z 50V
C816	403 049 0008	ELECT 1U M 50V
C817	403 049 0008	ELECT 1U M 50V
C818	403 049 0008	ELECT 1U M 50V
C819	403 042 7707	ELECT 22U M 16V
C820	403 043 9106	ELECT 47U M 16V
C821	403 043 9106	ELECT 47U M 16V
C831	403 048 6308	ELECT 0.47U M 50V
C832	403 046 9905	ELECT 4.7U M 25V
C848	403 022 6003	CERAMIC 33P J 50V
RESISTER		
RC484	401 024 7004	CARBON 1K JA 1/6W
RD732	401 025 8208	CARBON 22K JA 1/6W
RJ233	401 010 5809	CARBON 5.6 JA 1/2W
R100	401 024 6700	CARBON 100 JA 1/6W
R102	401 026 9907	CARBON 4.7K JA 1/6W
R103	401 024 7004	CARBON 1K JA 1/6W
R104	401 025 7409	CARBON 220 JA 1/6W
R105	401 025 7102	CARBON 22 JA 1/6W
R106	401 024 7004	CARBON 1K JA 1/6W
R107	401 027 2600	CARBON 5.6K JA 1/6W
R108	401 027 0309	CARBON 47K JA 1/6W
R109	401 024 7707	CARBON 100K JA 1/6W
R110	401 027 5205	CARBON 680 JA 1/6W
R111	401 026 9303	CARBON 47 JA 1/6W
R112	401 025 4200	CARBON 1.8K JA 1/6W
R113	401 012 4503	CARBON 100 JA 1/4W

Ref.No.	Part No.	Description
R117	401 026 7606	CARBON 390K JA 1/6W
R120	401 026 9600	CARBON 470 JA 1/6W
R121	401 027 2600	CARBON 5.6K JA 1/6W
R122	401 024 7004	CARBON 1K JA 1/6W
R123	401 025 7409	CARBON 220 JA 1/6W
R124	401 024 7004	CARBON 1K JA 1/6W
R126	401 022 1905	CARBON 680 JA 1/4W
R127	401 027 2600	CARBON 5.6K JA 1/6W
R130	401 024 7004	CARBON 1K JA 1/6W
R131	401 027 2600	CARBON 5.6K JA 1/6W
R132	401 027 2600	CARBON 5.6K JA 1/6W
R133	401 027 2303	CARBON 560 JA 1/6W
R134	401 027 5205	CARBON 680 JA 1/6W
R137	401 026 1604	CARBON 270K JA 1/6W
R138	401 026 1604	CARBON 270K JA 1/6W
R139	401 025 8703	CARBON 220K JA 1/6W
R140	401 024 7004	CARBON 1K JA 1/6W
R141	401 024 7400	CARBON 10K JA 1/6W
R142	401 026 9907	CARBON 4.7K JA 1/6W
R143	401 024 7400	CARBON 10K JA 1/6W
R144	401 025 1902	CARBON 15K JA 1/6W
R145	401 026 9600	CARBON 470 JA 1/6W
R146	401 027 5205	CARBON 680 JA 1/6W
R147	401 024 7004	CARBON 1K JA 1/6W
R148	401 025 7409	CARBON 220 JA 1/6W
R149	401 024 8001	CARBON 1M JA 1/6W
R150	401 024 9701	CARBON 12K JA 1/6W
R151	401 027 2600	CARBON 5.6K JA 1/6W
R152	401 027 2600	CARBON 5.6K JA 1/6W
R153	401 025 7805	CARBON 2.2K JA 1/6W
R154	401 025 4606	CARBON 18K JA 1/6W
R155	401 024 7400	CARBON 10K JA 1/6W
R156	401 024 7004	CARBON 1K JA 1/6W
R157	401 027 0309	CARBON 47K JA 1/6W
R158	401 027 2600	CARBON 5.6K JA 1/6W
R159	401 024 7400	CARBON 10K JA 1/6W
R160	401 027 8602	CARBON 8.2K JA 1/6W
R161	401 027 8305	CARBON 820 JA 1/6W
R162	401 027 5908	CARBON 68K JA 1/6W
R163	401 026 9907	CARBON 4.7K JA 1/6W
R164	401 027 2600	CARBON 5.6K JA 1/6W
R165	401 025 1605	CARBON 1.5K JA 1/6W
R166	401 026 4308	CARBON 3.3K JA 1/6W
R167	401 025 8703	CARBON 220K JA 1/6W
R171	401 026 3707	CARBON 33 JA 1/6W
R178	401 025 4903	CARBON 180K JA 1/6W
R179	401 024 7707	CARBON 100K JA 1/6W
R181	401 025 1902	CARBON 15K JA 1/6W
R183	401 025 1605	CARBON 1.5K JA 1/6W
R184	401 026 1307	CARBON 27K JA 1/6W
R185	401 024 6007	CARBON 1.5 JA 1/6W
R187	401 026 1604	CARBON 270K JA 1/6W
R188	401 027 0309	CARBON 47K JA 1/6W
R200	401 024 7400	CARBON 10K JA 1/6W
R201	401 025 1605	CARBON 1.5K JA 1/6W
R202	401 025 1605	CARBON 1.5K JA 1/6W
R203	401 024 7004	CARBON 1K JA 1/6W
R204	401 026 4308	CARBON 3.3K JA 1/6W
R205	401 026 0607	CARBON 270 JA 1/6W
R206	401 027 5502	CARBON 6.8K JA 1/6W
R212	401 025 8208	CARBON 22K JA 1/6W
R215	401 024 7400	CARBON 10K JA 1/6W
R216	401 027 8602	CARBON 8.2K JA 1/6W
R217	401 024 7400	CARBON 10K JA 1/6W
R230	401 027 3201	CARBON 560K JA 1/6W
R231	401 015 4708	CARBON 180K JA 1/4W
R232	401 024 7004	CARBON 1K JA 1/6W
R233	401 000 7509	SOLID 1.5K KA 1/2W
R235	401 027 5908	CARBON 68K JA 1/6W
R241	401 024 6700	CARBON 100 JA 1/6W

Ref. No.	Part No.	Description		
R244	401 027 5502	CARBON	6.8K JA	1/6W
R251	401 024 9305	CARBON	1.2K JA	1/6W
R255	401 024 7004	CARBON	1K JA	1/6W
R256	401 025 8208	CARBON	22K JA	1/6W
R261	401 026 9907	CARBON	4.7K JA	1/6W
R262	401 024 9701	CARBON	12K JA	1/6W
R263	401 025 8703	CARBON	220K JA	1/6W
R264	401 026 7606	CARBON	390K JA	1/6W
R281	401 026 6609	CARBON	390 JA	1/6W
R283	401 027 5205	CARBON	680 JA	1/6W
R284	401 027 2303	CARBON	560 JA	1/6W
R285	401 024 9008	CARBON	120 JA	1/6W
R301	401 008 8607	CARBON	220K JA	1/2W
R302	402 057 8204	WIRE WOUND	3.9 KA	6W
R311	401 027 2600	CARBON	5.6K JA	1/6W
R315	401 025 8208	CARBON	22K JA	1/6W
R317	401 024 7004	CARBON	1K JA	1/6W
R319	401 016 1508	CARBON	22 JA	1/4W
R320	401 000 5901	SOLID	120K KA	1/2W
R321	401 000 5901	SOLID	120K KA	1/2W
R322	401 014 5201	CARBON	15K JA	1/4W
R323	401 026 4308	CARBON	3.3K JA	1/6W
R324	401 069 1708	OXIDE-MT	68 JA	2W
R325	401 069 1708	OXIDE-MT	68 JA	2W
R326	401 017 1507	CARBON	2.7K GA	1/4W
⚠R331	402 000 8305	SOLID	5.6M KA	1/2W
⚠R332	402 000 8305	SOLID	5.6M KA	1/2W
R352	401 012 8105	CARBON	100K JA	1/4W
R353	401 026 9907	CARBON	4.7K JA	1/6W
R354	401 025 2305	CARBON	150K JA	1/6W
R355	401 010 4307	CARBON	47K JA	1/2W
R356	401 025 8208	CARBON	22K JA	1/6W
R361	401 066 2906	OXIDE-MT	2.2 JA	2W
R362	401 060 0403	OXIDE-MT	2.7 JA	1W
R363	401 064 6302	OXIDE-MT	10 JA	2W
R391	401 026 9600	CARBON	470 JA	1/6W
R392	401 025 8703	CARBON	220K JA	1/6W
R393	401 024 7400	CARBON	10K JA	1/6W
R401	401 025 8703	CARBON	220K JA	1/6W
R402	401 026 0607	CARBON	270 JA	1/6W
R411	401 024 7004	CARBON	1K JA	1/6W
R412	401 009 1508	CARBON	2.7K JA	1/2W
R420	401 007 4709	CARBON	1.2K JA	1/2W
R421	401 025 1605	CARBON	1.5K JA	1/6W
R422	401 025 8703	CARBON	220K JA	1/6W
R431	401 026 3905	CARBON	330 JA	1/6W
R432	401 024 7004	CARBON	1K JA	1/6W
R434	401 010 3102	CARBON	470 JA	1/2W
R435	402 055 4307	WIRE WOUND	10 KA	6W
R441	401 008 1608	CARBON	1.8K JA	1/2W
R442	401 025 8703	CARBON	220K JA	1/6W
R445	401 007 7601	CARBON	150 JA	1/2W
R446	401 024 8001	CARBON	1M JA	1/6W
R450	401 025 1605	CARBON	1.5K JA	1/6W
R451	401 025 1100	CARBON	15 JA	1/6W
R452	401 026 1307	CARBON	27K JA	1/6W
R453	401 027 5502	CARBON	6.8K JA	1/6W
R454	401 027 5908	CARBON	68K JA	1/6W
R455	401 026 1307	CARBON	27K JA	1/6W
R456	401 024 7004	CARBON	1K JA	1/6W
R457	401 026 8108	CARBON	4.7 JA	1/6W
R461	401 024 9701	CARBON	12K JA	1/6W
R462	401 024 9701	CARBON	12K JA	1/6W
R463	401 025 1902	CARBON	15K JA	1/6W
R465	401 006 8807	CARBON	1.8 JA	1/2W
R467	401 058 3706	OXIDE-MT	1K JA	1W
R468	401 009 5803	CARBON	330 JA	1/2W
R474	401 024 7400	CARBON	10K JA	1/6W
R481	401 057 9105	OXIDE-MT	1.2 JA	1W
R482	401 061 0006	OXIDE-MT	3.3 JA	1W

Ref.No.	Part No.	Description		
R483	401 026 4308	CARBON	3.3K JA	1/6W
R491	401 027 5502	CARBON	6.8K JA	1/6W
R495	401 024 7400	CARBON	10K JA	1/6W
R496	401 026 9600	CARBON	470 JA	1/6W
R551	401 009 9306	CARBON	390 JA	1/2W
R552	401 009 9306	CARBON	390 JA	1/2W
R553	401 027 2600	CARBON	5.6K JA	1/6W
R554	401 027 5502	CARBON	6.8K JA	1/6W
R556	401 022 6801	CARBON	75 JA	1/4W
R557	401 026 7408	CARBON	39K JA	1/6W
R558	401 026 7408	CARBON	39K JA	1/6W
R561	401 024 6700	CARBON	100 JA	1/6W
R562	401 024 7400	CARBON	10K JA	1/6W
R563	401 026 4308	CARBON	3.3K JA	1/6W
R564	401 025 7409	CARBON	220 JA	1/6W
R566	401 024 6700	CARBON	100 JA	1/6W
R567	401 024 7400	CARBON	10K JA	1/6W
R568	401 026 4308	CARBON	3.3K JA	1/6W
R569	401 025 3807	CARBON	180 JA	1/6W
R570	401 026 9907	CARBON	4.7K JA	1/6W
R571	401 026 7002	CARBON	3.9K JA	1/6W
R572	401 027 2600	CARBON	5.6K JA	1/6W
R573	401 027 2600	CARBON	5.6K JA	1/6W
R574	401 024 7004	CARBON	1K JA	1/6W
R575	401 024 7400	CARBON	10K JA	1/6W
R576	401 027 8602	CARBON	8.2K JA	1/6W
R577	401 027 8602	CARBON	8.2K JA	1/6W
R579	401 026 1000	CARBON	2.7K JA	1/6W
R701	401 059 6706	OXIDE-MT	180 JA	1W
R702	401 024 7400	CARBON	10K JA	1/6W
R703	401 026 9907	CARBON	4.7K JA	1/6W
R704	401 024 7400	CARBON	10K JA	1/6W
R705	401 027 5908	CARBON	68K JA	1/6W
R706	401 027 5908	CARBON	68K JA	1/6W
R707	401 027 0309	CARBON	47K JA	1/6W
R708	401 024 7400	CARBON	10K JA	1/6W
R709	401 025 4200	CARBON	1.8K JA	1/6W
R710	401 026 7606	CARBON	390K JA	1/6W
R711	401 027 3201	CARBON	560K JA	1/6W
R712	401 024 6700	CARBON	100 JA	1/6W
R713	401 024 7400	CARBON	10K JA	1/6W
R714	401 024 7400	CARBON	10K JA	1/6W
R715	401 019 1901	CARBON	3.9K JA	1/4W
R716	401 027 3003	CARBON	56K JA	1/6W
R717	401 025 8208	CARBON	22K JA	1/6W
R718	401 025 1902	CARBON	15K JA	1/6W
R719	401 027 8602	CARBON	8.2K JA	1/6W
R721	401 025 1605	CARBON	1.5K JA	1/6W
R722	401 027 8602	CARBON	8.2K JA	1/6W
R723	401 026 9907	CARBON	4.7K JA	1/6W
R725	401 024 7004	CARBON	1K JA	1/6W
R726	401 024 7004	CARBON	1K JA	1/6W
R727	401 024 7004	CARBON	1K JA	1/6W
R728	401 024 7004	CARBON	1K JA	1/6W
R729	401 025 7805	CARBON	2.2K JA	1/6W
R730	401 025 7805	CARBON	2.2K JA	1/6W
R731	401 024 7400	CARBON	10K JA	1/6W
R733	401 025 8208	CARBON	22K JA	1/6W
R734	401 027 0309	CARBON	47K JA	1/6W
R735	401 027 2600	CARBON	5.6K JA	1/6W
R736	401 025 8208	CARBON	22K JA	1/6W
R737	401 024 7400	CARBON	10K JA	1/6W
R738	401 027 2600	CARBON	5.6K JA	1/6W
R739	401 026 9907	CARBON	4.7K JA	1/6W
R740	401 025 8208	CARBON	22K JA	1/6W
R741	401 024 7707	CARBON	100K JA	1/6W
R742	401 024 7707	CARBON	100K JA	1/6W
R743	401 024 7707	CARBON	100K JA	1/6W
R744	401 026 9600	CARBON	470 JA	1/6W
R745	401 024 7004	CARBON	1K JA	1/6W

Ref. No.	Part No.	Description
R746	401 026 0607	CARBON 270 JA 1/6W
R747	401 024 7004	CARBON 1K JA 1/6W
R748	401 024 7004	CARBON 1K JA 1/6W
R749	401 024 7004	CARBON 1K JA 1/6W
R750	401 024 7004	CARBON 1K JA 1/6W
R751	401 027 2600	CARBON 5.6K JA 1/6W
R752	401 027 2600	CARBON 5.6K JA 1/6W
R753	401 026 4605	CARBON 33K JA 1/6W
R754	401 024 7004	CARBON 1K JA 1/6W
R755	401 026 4605	CARBON 33K JA 1/6W
R756	401 024 7004	CARBON 1K JA 1/6W
R757	401 024 7004	CARBON 1K JA 1/6W
R758	401 027 5502	CARBON 6.8K JA 1/6W
R759	401 025 8208	CARBON 22K JA 1/6W
R761	401 026 9600	CARBON 470 JA 1/6W
R762	401 024 7400	CARBON 10K JA 1/6W
R763	401 027 9005	CARBON 82K JA 1/6W
R764	401 025 4200	CARBON 1.8K JA 1/6W
R765	401 027 2303	CARBON 560 JA 1/6W
R766	401 027 2303	CARBON 560 JA 1/6W
R767	401 026 9600	CARBON 470 JA 1/6W
R768	401 025 1902	CARBON 15K JA 1/6W
R769	401 026 7408	CARBON 39K JA 1/6W
R770	401 025 7805	CARBON 2.2K JA 1/6W
R771	401 026 4308	CARBON 3.3K JA 1/6W
R772	401 025 4606	CARBON 18K JA 1/6W
R773	401 026 9907	CARBON 4.7K JA 1/6W
R774	401 025 4606	CARBON 18K JA 1/6W
R775	401 026 1307	CARBON 27K JA 1/6W
R776	401 025 4606	CARBON 18K JA 1/6W
R778	401 026 9907	CARBON 4.7K JA 1/6W
R779	401 026 7002	CARBON 3.9K JA 1/6W
R780	401 026 4605	CARBON 33K JA 1/6W
R781	401 027 0309	CARBON 47K JA 1/6W
R785	401 027 2600	CARBON 5.6K JA 1/6W
R786	401 027 2600	CARBON 5.6K JA 1/6W
R787	401 027 2600	CARBON 5.6K JA 1/6W
R788	401 025 8208	CARBON 22K JA 1/6W
R789	401 026 1307	CARBON 27K JA 1/6W
R790	401 026 4605	CARBON 33K JA 1/6W
R791	401 025 8208	CARBON 22K JA 1/6W
R792	401 026 9600	CARBON 470 JA 1/6W
R793	401 025 8208	CARBON 22K JA 1/6W
R794	401 025 7409	CARBON 220 JA 1/6W
R795	401 064 9907	OXIDE-MT 10K JA 2W
R796	401 025 7805	CARBON 2.2K JA 1/6W
R800	401 025 2305	CARBON 150K JA 1/6W
R801	401 024 6700	CARBON 100 JA 1/6W
R802	401 024 6700	CARBON 100 JA 1/6W
R803	401 024 6700	CARBON 100 JA 1/6W
R811	401 027 2600	CARBON 5.6K JA 1/6W
R812	401 027 2600	CARBON 5.6K JA 1/6W
R813	401 027 2303	CARBON 560 JA 1/6W
R814	401 024 7707	CARBON 100K JA 1/6W
R815	401 024 7707	CARBON 100K JA 1/6W
R816	401 022 6801	CARBON 75 JA 1/4W
R817	401 022 6801	CARBON 75 JA 1/4W
R818	401 022 6801	CARBON 75 JA 1/4W
R819	401 022 6801	CARBON 75 JA 1/4W
R820	401 026 4308	CARBON 3.3K JA 1/6W
R821	401 027 6608	CARBON 75 JA 1/6W
R822	401 022 6801	CARBON 75 JA 1/4W
R823	401 025 8208	CARBON 22K JA 1/6W
R824	401 024 9701	CARBON 12K JA 1/6W
R825	401 026 9907	CARBON 4.7K JA 1/6W
R826	401 024 9305	CARBON 1.2K JA 1/6W
R827	401 024 7004	CARBON 1K JA 1/6W
R828	401 024 9305	CARBON 1.2K JA 1/6W
R834	401 027 5908	CARBON 68K JA 1/6W
R837	401 024 7400	CARBON 10K JA 1/6W

Ref.No.	Part No.	Description
R838	401 026 4308	CARBON 3.3K JA 1/6W
R840	401 024 7707	CARBON 100K JA 1/6W
R841	401 025 1902	CARBON 15K JA 1/6W
R842	401 026 4605	CARBON 33K JA 1/6W
R843	401 027 0309	CARBON 47K JA 1/6W
R844	401 026 1000	CARBON 2.7K JA 1/6W
R845	401 024 7400	CARBON 10K JA 1/6W
R846	401 025 1902	CARBON 15K JA 1/6W
R847	401 024 7400	CARBON 10K JA 1/6W
R848	401 027 5908	CARBON 68K JA 1/6W
R849	401 009 5803	CARBON 330 JA 1/2W
R850	401 024 7004	CARBON 1K JA 1/6W
R851	401 025 1308	CARBON 150 JA 1/6W
R852	401 024 7004	CARBON 1K JA 1/6W
R853	401 026 9303	CARBON 47 JA 1/6W
R854	401 024 6700	CARBON 100 JA 1/6W
R855	401 024 6700	CARBON 100 JA 1/6W
R856	401 024 6700	CARBON 100 JA 1/6W
R857	401 027 2600	CARBON 5.6K JA 1/6W
R858	401 025 8208	CARBON 22K JA 1/6W
R859	401 027 5502	CARBON 6.8K JA 1/6W
R861	401 027 8602	CARBON 8.2K JA 1/6W
R862	401 024 7004	CARBON 1K JA 1/6W
VARIABLE RESISTER		
VC121	610 003 0374	TRIMMER CONDENSER
VC131	610 002 7671	TRIMMER CONDENSER
VC571	610 002 7541	TRIMMER
VR101	610 019 3901	VR B-10K
VR121	610 019 3864	VR B-1K
VR151	610 019 3895	VR B-5K
VR211	610 019 3932	VR B-50K
VR281	610 019 3864	VR B-1K
VR351	610 019 3871	VR B-2K
VR411	610 019 3918	VR B-20K
VR451	610 019 3932	VR B-50K
VR710	610 019 3888	VR B-3K
TRANSFORMER		
T101	610 037 5727	S TRANS
T102	610 037 7103	S TRANS
T121	610 037 4522	S COIL
T131	610 037 6557	S TRANS
	610 037 6564	S TRANS
T281	610 037 7028	S TRANS
⚠T311	610 221 0026	CONVERTER TRANS
⚠T371	610 033 3765	POWER TRANS
T431	610 000 1060	DRIVE TRANS
	610 000 1053	DRIVE TRANS
⚠T471	610 213 3721	FBT
T551	610 037 7400	S TRANS
T552	610 037 7394	S TRANS
T561	610 037 7417	S TRANS
T571	610 037 4522	S COIL
COIL		
LJ211	610 031 3057	PEAKING COIL
L121	610 031 3958	PEAKING COIL
L122	610 029 6022	PEAKING COIL 15UH K
	610 210 3410	PEAKING COIL 15UHK
	610 029 8224	PEAKING COIL 15UH K
L141	610 029 6022	PEAKING COIL 15UH K
	610 210 3410	PEAKING COIL 15UHK
	610 029 8224	PEAKING COIL 15UH K
L161	610 029 6022	PEAKING COIL 15UH K
	610 210 3410	PEAKING COIL 15UHK
	610 029 8224	PEAKING COIL 15UH K
L201	610 030 0873	DELAY LINE
L211	610 037 4546	S COIL
L221	610 029 5926	PEAKING COIL 10UH K

Ref. No.	Part No.	Description
	610 210 3366	PEAKING COIL 10UHK
	610 029 8125	PEAKING COIL 10UH K
L251	610 031 4177	PEAKING COIL
L281	610 031 4290	PEAKING COIL 8.2UHK
L282	610 032 6699	1H DELAYLINE
	610 032 6705	1H DELAYLINE
L283	610 210 3465	PEAKING COIL 2.7UHK
	610 029 8323	PEAKING COIL 2.7UH K
⚠L301	610 212 6013	LINE FILTER
⚠L302	610 031 5945	LINE FILTER
	610 031 5969	LINE FILTER
	610 213 9563	LINE FILTER
	610 223 5722	LINE FILTER
⚠L303	610 031 5945	LINE FILTER
	610 031 5969	LINE FILTER
	610 213 9563	LINE FILTER
	610 223 5722	LINE FILTER
L441	610 000 0605	LINEARITY COIL
	610 210 8071	LINEARITY COIL
L442	610 000 0278	COIL
L445	610 032 1243	INDUCTOR 150UHK
L451	610 031 3156	PEAKING COIL
	610 210 3809	PEAKING COIL 18UHK
L551	610 031 4436	PEAKING COIL
L781	610 031 3873	PEAKING COIL 10UHK
L801	610 031 3873	PEAKING COIL 10UHK
DIODE		
D110	407 048 5606	ZENER DIODE EQA02-10A
D121	407 088 2603	DIODE 1SS265
D131	407 088 2603	DIODE 1SS265
D132	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D141	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D142	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D171	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D230	407 075 9905	ZENER DIODE EQA03-11A
D231	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D242	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D243	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D244	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D255	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D303	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D304	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D305	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C

Ref.No.	Part No.	Description
	407 064 6908	DIODE TVR4N(X)
D306	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D314	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
⚠D315	407 105 8700	PHOTO COUPLE PC113B
	408 009 8407	PHOTO COUPLE CNY17F-30PT6
D316	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D317	407 007 6606	DIODE ES1
	407 007 6903	DIODE ES1Z
	408 009 9008	DIODE BYD33D
D318	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D319	407 048 4005	ZENER DIODE EQA02-08A
	407 048 4203	ZENER DIODE EQA02-08B
D351	407 007 7702	DIODE EU2A
	408 009 9206	DIODE BYD33J
	407 064 7004	DIODE 1S1835
D352	407 007 7504	DIODE EU1C
D353	407 007 6606	DIODE ES1
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D354	407 124 6008	DIODE RGP30BL
	407 129 6805	DIODE RU4Y LF-L1
D355	407 007 7801	DIODE EU2Z
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D361	407 048 2407	ZENER DIODE EQA02-06E
	407 048 2605	ZENER DIODE EQA02-06F
D371	407 005 7308	DIODE EM01Z
	407 006 1008	DIODE ERB12-02RK
D391	408 008 2406	DIODE 1N4148
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D392	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D394	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D411	407 048 5606	ZENER DIODE EQA02-10A
	407 048 5804	ZENER DIODE EQA02-10B
D441	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D444	407 118 2207	ZENER DIODE 1Z75
D445	407 118 2207	ZENER DIODE 1Z75
D451	407 005 7308	DIODE EM01Z
	407 006 1008	DIODE ERB12-02RK
	408 009 9008	DIODE BYD33D
D452	407 007 7801	DIODE EU2Z
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D453	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D481	407 048 2001	ZENER DIODE EQA02-06B
D482	407 007 6606	DIODE ES1
	408 009 9008	DIODE BYD33D

Ref. No.	Part No.	Description
	407 013 1909	DIODE 1S1834
D484	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D491	407 048 1103	ZENER DIODE EQA02-05D
	407 048 1202	ZENER DIODE EQA02-05E
D493	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D494	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D495	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D551	407 088 2603	DIODE 1SS265
D552	407 088 2603	DIODE 1SS265
D571	407 088 2603	DIODE 1SS265
D701	407 048 1103	ZENER DIODE EQA02-05D
	407 048 1202	ZENER DIODE EQA02-05E
D702	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D704	407 116 6504	LED SLP-181B-51
D711	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D712	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D721	407 055 7907	ZENER DIODE RD3.6EL
D731	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D741	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D742	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D751	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D781	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D791	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D792	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D811	407 075 9905	ZENER DIODE EQA03-11A
D812	407 075 9905	ZENER DIODE EQA03-11A
D813	407 075 9905	ZENER DIODE EQA03-11A
D814	407 075 9905	ZENER DIODE EQA03-11A
D815	407 075 9905	ZENER DIODE EQA03-11A
D816	407 075 9905	ZENER DIODE EQA03-11A
D818	407 075 9905	ZENER DIODE EQA03-11A
D819	407 075 9905	ZENER DIODE EQA03-11A
D821	407 075 9905	ZENER DIODE EQA03-11A
D822	407 075 9905	ZENER DIODE EQA03-11A

Ref.No.	Part No.	Description
D824	407 075 9905	ZENER DIODE EQA03-11A
D825	407 075 9905	ZENER DIODE EQA03-11A
MISCELLANEUS		
⚠F301	423 006 4801	FUSE 250V 2.5A
	423 006 4702	FUSE 250V 2.5A
TH110	407 015 0405	THERMISTOR SDT-35-CTV
TH710	407 015 0405	THERMISTOR SDT-35-CTV
A101	610 227 3854	UV VARACTOR TUNER
A701	610 214 4833	RC PREAMP 409-1F
	610 224 5806	RC PREAMP 409-1F
KS	610 009 8275	SOCKET 21P
	610 218 6673	SOCKET 21P
	610 225 2361	SOCKET 21P
⚠PS301	408 003 6805	THERMISTOR 902P44E180MR14
	408 000 3906	TH PTH451A13BG180M270
SW251	610 011 2728	LEVER SWITCH
⚠SW301	610 218 9162	PUSH SWITCH
SW451	610 011 2728	LEVER SWITCH
SW701	610 011 4432	PUSH SWITCH
SW702	610 011 4432	PUSH SWITCH
SW703	610 011 4432	PUSH SWITCH
SW704	610 011 4432	PUSH SWITCH
SW705-10	610 011 4463	PUSH SWITCH
X101	421 002 8304	SAW F TSF5333
X121	610 015 2854	CERAMIC FILTER
X122	610 015 3011	CERAMIC FILTER
X143	610 015 2878	CERAMIC FILTER
X161	610 216 7245	CERAMIC FILTER
X201	610 012 0495	CRYSTAL OSCILLATOR
	610 012 0501	CRYSTAL OSCILLATOR
	610 204 4188	CRYSTAL OSCILLATOR
	610 012 0525	CRYSTAL OSCILLATOR
X251	610 012 2222	CERAMIC TRAP
	610 226 6894	CERAMIC TRAP
X421	610 216 6149	CERAMIC OSCILLATOR
X551	421 000 3103	SAW F TSB2305
X701	610 012 2857	CERAMIC OSCILLATOR
	610 212 8765	CERAMIC OSCILLATOR

610 231 3222 SECAM PCB ASSY E4WA UE2424

TRANSISTER				
Q1301	405 015 8704	TR 2SC2812-L6-TA		
Q1303	405 015 8704	TR 2SC2812-L6-TA		
Q1341	405 015 8704	TR 2SC2812-L6-TA		
Q1357	405 015 8704	TR 2SC2812-L6-TA		
INTEGRATED CIRCUIT				
IC1301	409 000 9707	IC AN5635N-A		
CAPACITOR				
C1301	403 134 6007	ELECT	330U M	16V
C1302	403 061 4008	POLYESTER	0.039U K	50V
C1303	403 125 6900	CERAMIC	27P J	50V
C1304	403 022 9004	CERAMIC	33P J	50V
C1305	403 069 9609	CERAMIC	0.01U Z	50V
C1306	403 217 1509	CERAMIC	270P J	50V
C1307	403 030 7801	CERAMIC	68P J	50V
C1308	403 069 9609	CERAMIC	0.01U Z	50V
C1309	403 069 9609	CERAMIC	0.01U Z	50V
C1310	403 009 6309	CERAMIC	100P J	50V
C1311	403 033 9208	CERAMIC	820P J	50V
C1312	403 109 6308	ELECT	1U M	50V
C1314	403 069 9609	CERAMIC	0.01U Z	50V
C1315	403 033 5309	CERAMIC	82P J	50V
C1316	403 071 6603	CERAMIC	220P K	50V
C1317	403 018 1203	CERAMIC	22P J	50V
C1318	403 109 6308	ELECT	1U M	50V
C1319	403 109 6308	ELECT	1U M	50V

Ref. No.	Part No.	Description
C1321	403 107 9905	ELECT 10U M 16V
C1322	403 107 9905	ELECT 10U M 16V
C1325	403 107 9905	ELECT 10U M 16V
C1326	403 107 9905	ELECT 10U M 16V
C1331	403 026 3602	CERAMIC 47P J 50V
C1332	403 069 9609	CERAMIC 0.01U Z 50V
C1333	403 069 9609	CERAMIC 0.01U Z 50V
C1334	403 028 5000	CERAMIC 56P J 50V
C1335	403 013 3400	CERAMIC 150P J 50V
C1336	403 125 6603	CERAMIC 18P J 50V
C1337	403 069 9609	CERAMIC 0.01U Z 50V
C1338	403 033 5309	CERAMIC 82P J 50V
C1339	403 024 2706	CERAMIC 39P J 50V
C1341	403 069 9609	CERAMIC 0.01U Z 50V
C1342	403 069 9609	CERAMIC 0.01U Z 50V
C1361	403 071 6603	CERAMIC 220P K 50V
C1362	403 071 6603	CERAMIC 220P K 50V
C1363	403 071 6603	CERAMIC 220P K 50V
RESISTER		
R1300	401 037 0108	MT-GLAZE 5.6K JA 1/8W
R1301	401 036 3100	MT-GLAZE 27K JA 1/8W
R1302	401 036 5104	MT-GLAZE 33K JA 1/8W
R1303	401 035 4900	MT-GLAZE 1K JA 1/8W
R1304	401 036 1403	MT-GLAZE 220 JA 1/8W
R1305	401 036 8303	MT-GLAZE 4.7K JA 1/8W
R1306	401 036 2806	MT-GLAZE 2.7K JA 1/8W
R1307	401 037 0405	MT-GLAZE 56K JA 1/8W
R1308	401 036 3308	MT-GLAZE 270K JA 1/8W
R1309	401 036 0000	MT-GLAZE 180K JA 1/8W
R1313	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1314	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1321	401 035 6805	MT-GLAZE 1.2K JA 1/8W
R1323	401 035 6805	MT-GLAZE 1.2K JA 1/8W
R1325	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1326	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1331	401 036 1403	MT-GLAZE 220 JA 1/8W
R1332	401 036 9904	MT-GLAZE 560 JA 1/8W
R1333	401 037 3703	MT-GLAZE 820 JA 1/8W
R1334	401 036 4800	MT-GLAZE 3.3K JA 1/8W
R1335	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1336	401 036 1700	MT-GLAZE 22K JA 1/8W
R1337	401 035 5204	MT-GLAZE 10K JA 1/8W
R1341	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1342	401 037 3703	MT-GLAZE 820 JA 1/8W
R1343	401 037 0405	MT-GLAZE 56K JA 1/8W
R1344	401 036 1700	MT-GLAZE 22K JA 1/8W
R1345	401 037 0108	MT-GLAZE 5.6K JA 1/8W
R1346	401 036 8303	MT-GLAZE 4.7K JA 1/8W
R1353	401 035 5204	MT-GLAZE 10K JA 1/8W
R1354	401 035 9806	MT-GLAZE 18K JA 1/8W
R1355	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1356	401 037 0108	MT-GLAZE 5.6K JA 1/8W
R1357	401 035 5204	MT-GLAZE 10K JA 1/8W
R1361	401 035 7703	MT-GLAZE 150 JA 1/8W
R1362	401 035 7703	MT-GLAZE 150 JA 1/8W
R1363	401 035 7703	MT-GLAZE 150 JA 1/8W
VARIABLE RESISTER		
VR1301	610 019 3871	VR B-2K
TRANSFORMER		
T1301	610 037 5819	S TRANS
T1302	610 037 4546	S COIL
T1303	610 037 4546	S COIL
T1304	610 037 4546	S COIL
COIL		
L1301	610 029 5292	PEAKING COIL
L1302	610 029 5421	PEAKING COIL
L1303	610 029 5346	PEAKING COIL

Ref.No.	Part No.	Description
L1304	610 226 8201	PEAKING COIL
L1305	610 029 5346	PEAKING COIL
DIODE		
D1301	407 004 8009	DIODE DSB015-TA
D1302	407 143 0100	DIODE 1K188FM-1(MS)
	407 102 6006	DIODE 1S188-TV-M
D1334	407 004 8009	DIODE DSB015-TA
D1353	407 004 8009	DIODE DSB015-TA
MISCELLANEUS		
K13A	610 224 9293	PCB MTG BRKT-B-E3HB

610 231 3895 CRT PCB ASSY E4WA UE2426

TRANSISTER		
Q601	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q611	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q621	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q641	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
CAPACITOR		
C602	403 074 8901	CERAMIC 680P K 50V
C612	403 074 8901	CERAMIC 680P K 50V
C622	403 075 4209	CERAMIC 820P K 50V
C631	403 077 2708	CERAMIC 1000P P 2K
C642	403 024 0009	CERAMIC 39P J 50V
RESISTER		
R601	401 065 4604	OXIDE-MT 12K JA 2W
R602	401 002 0102	SOLID 3.3K KA 1/2W
R611	401 065 4604	OXIDE-MT 12K JA 2W
R612	401 002 0102	SOLID 3.3K KA 1/2W
R621	401 065 4604	OXIDE-MT 12K JA 2W
R622	401 002 0102	SOLID 3.3K KA 1/2W
R624	401 016 2604	CARBON 220 JA 1/4W
R631	401 001 7607	SOLID 270K KA 1/2W
R632	401 018 1605	CARBON 33 JA 1/4W
R642	401 022 1905	CARBON 680 JA 1/4W
VARIABLE RESISTER		
VR601	610 019 0825	VR
VR602	610 019 0818	VR
VR611	610 019 0825	VR
VR612	610 019 0818	VR
VR621	610 019 0825	VR
MISCELLANEUS		
⚠K601	610 010 7717	CRT SOCKET

Ref. No.	Part No.	Description	Ref.No.	Part No.	Description
OUT OF CIRCUIT BOARD					
PICTURE TUBE					
⚠Q901	414 005 4404	CRT A51EBV12X09			
COIL					
⚠L901	610 030 4437	DEGAUSSING COIL			
	610 204 8537	DEGAUSSING COIL			
MISCELLANEUS					
SP901	610 230 5234	SPEAKER			
⚠W901	610 011 9864	AC CORD			
W902	610 024 2531	GROUNDING CONNECTOR			

CHASSIS ELECTRICAL PARTS LIST CEM1761F

Rroduct safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a ⚠ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

Note: Part order must contain Service Ref. No. , Part Ref. No. , Part No. ,and descriptions. The main PCB unit will be supplied without tuner and flyback transformer. They should be ordered separately.

Read description in the Capacitor and Resister as follows:

CAPACITOR

CERAMIC 100P K 50V

- 50V — Rated Voltage
- K — Tolerance Symbols:

Less than 10PF

A: Not specified	B: ± 0.1PF	C: ± 0.25PF
D: ± 0.5PF	F: ± 1PF	G: ± 2PF
R: +0.25-0PF	S: +0-0.25PF	E: +0-1PF

Moer than 10PF

A: Not specified	B: ± 0.1%	C: ± 0.25%
D: ± 0.5%	F: ± 1%	G: ± 2%
H: ± 3%	J : ± 5%	K: ± 10%
L : ± 15%	M: ± 20%	N: ± 30%
P: +100-0%	Q: +30-10%	T: +50-10%
U: +75-10%	V: +20-10%	W: +100-10%
X: +40-20%	Y: +150-10%	Z: +80-20%

- 100P — Rated value:P=pico farad,U=Micro farad

Material :

CERAMIC.....Ceramic
MT-PAPER.....Metallised Paper
POLYESTER.....Polyester
MT-POLYEST.....Metallized Polyester
POLYPRO.....Polypropylene
MT-POLYPRO.....Metallized Polypropylene
COMPO FILM.....Composite film
MT-COMPO.....Metallized Copmposite
STYRENE.....Styrene
TA-SOLID.....Tantalum Solid
AL-SOLID.....Aluminium Solid
ELECT.....Electrolytic
NP-ELECT.....Non-polarized Electrolytic
OS-SOLID.....Aluminium Solid with Organic Semiconductive Electrolytic
DL-ELECT.....Doble Layered Electrolytic

RESISTER

CARBON 4.7K J A 1/4W

- 1/4W — Rated Wattage
- A — Performance Symbols:
  A:General B:Non flammable Z:Low noise
  Other :Temperature coefficient
- J — Tolerance Symbols:
  A: ± 0.05% B: ± 0.1% C: ± 0.25% D: ± 0.5%
  F: ± 1% G: ± 2% J: ± 5% K: ± 10%
  M: ± 20% P:+5-15%
- 4.7K — Rated value, ohms:
  K:1,000, M:1,000,000

Material :

CARBON .....Carbon
MT-FILM.....Metal Film
OXIDE-MT .....Oxide Metal Film
SOLID .....Composition
MT-GLAZE .....Metal Glaze
WIRE WOUND .....Wire Wound
CERAMIC RES.....Ceramic
FUSIBLE RES .....Fusible

610 230 6880 CRT PCB ASSY E3FA UE2415

TRANSISTER

Ref. No.	Part No.	Description
Q601	405 040 5600	TR 2SC2228-D
	405 029 6901	TR 2SC2228-E
	406 000 5104	TR 2SC2229-O(SAN-2)
	406 000 5203	TR 2SC2229-Y(SAN-2)
Q611	405 040 5600	TR 2SC2228-D
	405 029 6901	TR 2SC2228-E
	406 000 5104	TR 2SC2229-O(SAN-2)
	406 000 5203	TR 2SC2229-Y(SAN-2)
Q621	405 040 5600	TR 2SC2228-D
	405 029 6901	TR 2SC2228-E
	406 000 5104	TR 2SC2229-O(SAN-2)
	406 000 5203	TR 2SC2229-Y(SAN-2)
Q641	405 040 5600	TR 2SC2228-D
	405 029 6901	TR 2SC2228-E
	406 000 5104	TR 2SC2229-O(SAN-2)
	406 000 5203	TR 2SC2229-Y(SAN-2)

CAPACITOR

Ref. No.	Part No.			
C602	403 073 6403	CERAMIC	470P K	50V
C612	403 073 6403	CERAMIC	470P K	50V
C622	403 074 5702	CERAMIC	560P K	50V
C631	403 077 2708	CERAMIC	1000P P	2K
C632	403 077 2708	CERAMIC	1000P P	2K
C642	403 024 0009	CERAMIC	39P J	50V

RESISTER

Ref. No.	Part No.			
R601	401 065 4604	OXIDE-MT	12K JA	2W
R602	401 002 0102	SOLID	3.3K KA	1/2W
R611	401 065 4604	OXIDE-MT	12K JA	2W
R612	401 002 0102	SOLID	3.3K KA	1/2W
R621	401 065 4604	OXIDE-MT	12K JA	2W
R622	401 002 0102	SOLID	3.3K KA	1/2W
R624	401 017 0807	CARBON	270 JA	1/4W
R631	401 001 7607	SOLID	270K KA	1/2W
R632	401 018 1605	CARBON	33 JA	1/4W
R642	401 022 1905	CARBON	680 JA	1/4W

VARIABLE RESISTER

Ref. No.	Part No.	
VR601	610 019 0108	VR
VR602	610 018 9164	VR B-500
VR611	610 019 0108	VR
VR612	610 018 9164	VR B-500
VR621	610 019 0108	VR

MISCELLANEUS

Ref. No.	Part No.	
⚠K601	610 010 4938	CRT SOCKET

Ref. No.	Part No.	Description
610 231 3215 MAIN PCB ASSY E4VA UE2423		
TRANSISTER		
Q101	405 014 9207	TR 2SC2570A
Q110	405 023 4903	TR 2SD400-D-MP
	405 023 5009	TR 2SD400-E-MP
	405 023 5306	TR 2SD400-F-MP
Q123	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q124	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q141	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q142	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q143	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP

Ref.No.	Part No.	Description
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q144	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q145	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q146	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q147	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q148	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q

Ref. No.	Part No.	Description
	405 006 1806	TR 2SA933S-R
Q149	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q150	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q181	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q311	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q312	405 058 0208	TR 2SC3807-R-CTV-YA
Q313	405 022 8506	TR 2SD1710-CTV-YB
Q353	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q431	405 014 2406	TR 2SC2383-O(SAN)
	405 014 2505	TR 2SC2383-R(SAN)
Q432	405 022 6601	TR 2SD1649-CTV-YB
Q481	405 013 6801	TR 2SC2274-E
	405 013 7006	TR 2SC2274-F
Q551	405 013 3305	TR 2SC2216(SAN)
Q561	405 016 0806	TR 2SC2839-E
	405 016 1001	TR 2SC2839-F
Q562	405 016 0806	TR 2SC2839-E
	405 016 1001	TR 2SC2839-F
Q701	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q711	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q721	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q731	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q732	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y

Ref. No.	Part No.	Description
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q733	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q735	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q737	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q742	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q743	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q

Ref.No.	Part No.	Description
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q751	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q752	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q753	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q761	405 039 3303	TR 2SC3114-R
	405 039 3402	TR 2SC3114-S
	405 017 1901	TR 2SC3114-T
	405 017 2106	TR 2SC3114-U
Q762	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP

Ref. No.	Part No.	Description
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q785	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q792	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q811	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q812	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q813	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S

Ref.No.	Part No.	Description
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q815	406 000 6804	TR 2SA1015-GR(SAN)
	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
Q816	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
Q817	405 013 3305	TR 2SC2216(SAN)
Q818	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q819	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
INTEGRATED CIRCUIT		
IC101	409 185 0308	IC LA7681
IC141	409 020 8704	IC LC4066B
	409 030 5809	IC MC14066B
	409 207 1900	IC MLC4066B
	409 051 3501	IC TC4066BP
IC171	409 073 1509	IC AN5265
IC351	409 077 4803	IC L7812-RA
IC451	409 173 2703	IC LA7837
IC551	409 082 7202	IC LA7710
IC701	410 081 5007	IC M34300N4-624SP
IC710	409 019 6209	IC LA7910
IC751	409 019 6209	IC LA7910
IC791	409 013 0104	IC HZT33
	409 026 8005	IC L5630
	409 057 5103	IC UPC574J

Ref. No.	Part No.	Description		
IC811	409 000 9202	IC AN5352		
IC812	409 020 8704	IC LC4066B		
	409 030 5809	IC MC14066B		
	409 207 1900	IC MLC4066B		
	409 051 3501	IC TC4066BP		
CAPACITOR				
C100	403 069 8305	CERAMIC	0.01U Z	50V
C101	403 043 9106	ELECT	47U M	16V
C102	403 046 9905	ELECT	4.7U M	25V
C103	403 046 9905	ELECT	4.7U M	25V
C104	403 046 9905	ELECT	4.7U M	25V
C105	403 048 6308	ELECT	0.47U M	50V
C106	403 011 3808	CERAMIC	120P J	50V
C107	403 009 3407	CERAMIC	100P J	50V
C108	403 024 0009	CERAMIC	39P J	50V
C109	403 069 8305	CERAMIC	0.01U Z	50V
C110	403 024 9705	CERAMIC	4P C	50V
C111	403 069 8305	CERAMIC	0.01U Z	50V
C112	403 069 8305	CERAMIC	0.01U Z	50V
C113	403 056 9506	POLYESTER	0.01U J	50V
	403 057 0205	POLYESTER	0.01U J	50V
C114	403 042 7707	ELECT	22U M	16V
C115	403 048 6308	ELECT	0.47U M	50V
C116	403 059 5901	POLYESTER	0.022U K	50V
	403 059 6700	POLYESTER	0.022U K	50V
C117	403 043 6006	ELECT	330U M	16V
C118	403 024 9705	CERAMIC	4P C	50V
C119	403 069 8305	CERAMIC	0.01U Z	50V
C120	403 049 0008	ELECT	1U M	50V
C121	403 026 0700	CERAMIC	47P J	50V
C122	403 069 8305	CERAMIC	0.01U Z	50V
C123	403 069 8305	CERAMIC	0.01U Z	50V
C130	403 069 8305	CERAMIC	0.01U Z	50V
C131	403 033 3503	CERAMIC	82P J	50V
C132	403 022 5907	CERAMIC	33P J	50V
C133	403 069 0507	CERAMIC	1000P K	50V
C134	403 069 8305	CERAMIC	0.01U Z	50V
C135	403 166 7706	MT-POLYEST	0.47U J	63V
	403 067 7805	MT-COMPO	0.47U J	50V
C136	403 017 7404	CERAMIC	22P J	50V
C141	403 022 6300	CERAMIC	33P J	50V
C142	403 069 0507	CERAMIC	1000P K	50V
C143	403 009 3407	CERAMIC	100P J	50V
C144	403 017 7602	CERAMIC	22P J	50V
C145	403 049 0008	ELECT	1U M	50V
C146	403 069 8305	CERAMIC	0.01U Z	50V
C151	403 062 5103	POLYESTER	5600P K	50V
	403 062 5707	POLYESTER	5600P K	50V
C155	403 069 8305	CERAMIC	0.01U Z	50V
C161	403 069 8305	CERAMIC	0.01U Z	50V
C162	403 041 8804	ELECT	10U M	16V
C163	403 041 8804	ELECT	10U M	16V
C164	403 069 8305	CERAMIC	0.01U Z	50V
C171	403 042 2405	ELECT	100U M	16V
C172	403 041 8804	ELECT	10U M	16V
C181	403 044 9501	ELECT	100U M	25V
C182	403 041 8804	ELECT	10U M	16V
C183	403 041 8804	ELECT	10U M	16V
C184	403 166 7706	MT-POLYEST	0.47U J	63V
	403 067 7805	MT-COMPO	0.47U J	50V
C185	403 047 5005	ELECT	470U M	25V
C186	403 069 8305	CERAMIC	0.01U Z	50V
C187	403 042 7707	ELECT	22U M	16V
C188	403 049 9803	ELECT	2.2U M	50V
C201	403 041 8804	ELECT	10U M	16V
C202	403 019 7709	CERAMIC	27P J	50V
C203	403 069 8305	CERAMIC	0.01U Z	50V
C205	403 070 4600	CERAMIC	1200P K	50V
C211	403 049 9803	ELECT	2.2U M	50V

Ref.No.	Part No.	Description		
C221	403 069 8305	CERAMIC	0.01U Z	50V
C222	403 042 2405	ELECT	100U M	16V
C231	403 085 7306	NP-ELECT	10U M	25V
C232	403 048 6308	ELECT	0.47U M	50V
C233	403 046 9905	ELECT	4.7U M	25V
C235	403 011 3808	CERAMIC	120P J	50V
C251	403 030 5401	CERAMIC	68P J	50V
C252	403 026 1103	CERAMIC	47P J	50V
C253	403 069 8305	CERAMIC	0.01U Z	50V
C255	403 069 8305	CERAMIC	0.01U Z	50V
C261	403 069 8305	CERAMIC	0.01U Z	50V
C262	403 086 2607	NP-ELECT	1U M	50V
C263	403 069 8305	CERAMIC	0.01U Z	50V
C264	403 069 8305	CERAMIC	0.01U Z	50V
C265	403 048 6308	ELECT	0.47U M	50V
C271	403 057 0403	POLYESTER	0.01U K	50V
	403 057 1004	POLYESTER	0.01U K	50V
C272	403 069 8305	CERAMIC	0.01U Z	50V
C282	403 013 1901	CERAMIC	150P J	50V
C283	403 069 8305	CERAMIC	0.01U Z	50V
C284	403 069 8305	CERAMIC	0.01U Z	50V
C285	403 069 8305	CERAMIC	0.01U Z	50V
C286	403 017 7701	CERAMIC	22P J	50V
C290	403 148 0305	ELECT	470U M	16V
⚠C301	404 007 9903	MT-COMPO	0.1U M	250V
⚠C302	404 007 9903	MT-COMPO	0.1U M	250V
C303	403 076 9203	CERAMIC	2200P M	1K
C304	403 076 9203	CERAMIC	2200P M	1K
C305	403 076 9203	CERAMIC	2200P M	1K
C306	403 076 9203	CERAMIC	2200P M	1K
C307	404 038 1600	ELECT	100U M	400V
C314	403 061 4008	POLYESTER	0.039U K	50V
	403 061 4503	POLYESTER	0.039U K	50V
C315	403 057 6801	POLYESTER	0.012U J	50V
	403 057 7303	POLYESTER	0.012U J	50V
C316	403 165 8407	CERAMIC	680P K	2K
	403 077 9103	CERAMIC	680P K	2K
C317	403 059 5901	POLYESTER	0.022U K	50V
	403 059 6700	POLYESTER	0.022U K	50V
C318	403 165 6106	CERAMIC	470P K	1K
	403 077 0407	CERAMIC	470P K	1K
⚠C331	404 008 4105	CERAMIC	2200P M	400V
⚠C334	404 008 3108	CERAMIC	470P M	400V
C351	403 165 8605	CERAMIC	470P K	2K
	403 077 7901	CERAMIC	470P K	2K
C352	403 167 8603	CERAMIC	220P K	2K
	403 077 5105	CERAMIC	220P K	2K
C361	404 042 4703	ELECT	220U M	160V
C362	403 055 8401	ELECT	22U M	250V
C363	403 053 6904	ELECT	330U M	35V
C364	403 148 0404	ELECT	1000U M	25V
C365	403 119 8002	ELECT	470U M	25V
C371	403 047 5005	ELECT	470U M	25V
C401	403 049 9803	ELECT	2.2U M	50V
C402	403 071 2407	CERAMIC	1800P K	50V
C411	403 069 0507	CERAMIC	1000P K	50V
C421	403 042 2405	ELECT	100U M	16V
C422	403 060 8205	POLYESTER	0.033U K	50V
	403 060 8809	POLYESTER	0.033U K	50V
C423	403 051 0607	ELECT	4.7U M	50V
C424	403 062 6902	POLYESTER	0.056U K	50V
	403 062 7404	POLYESTER	0.056U K	50V
C425	403 048 6308	ELECT	0.47U M	50V
C431	403 062 6902	POLYESTER	0.056U K	50V
	403 062 7404	POLYESTER	0.056U K	50V
C432	403 075 7101	CERAMIC	1000P K	500V
C433	403 076 3102	CERAMIC	3900P K	500V
C434	403 054 0703	ELECT	47U M	35V
C435	404 030 3909	MT-POLYPRO	5600P J	1.5K
	404 030 4005	MT-POLYPRO	5600P J	1.5K

Ref. No.	Part No.	Description
C436	403 165 7707	CERAMIC 220P J 3K
	403 078 2608	CERAMIC 220P J 3K
C437	403 062 2201	POLYESTER 0.47U K 50V
C441	403 082 9006	POLYPRO 0.27U J 200V
C443	403 055 3802	ELECT 4.7U M 160V
C445	403 049 0008	ELECT 1U M 50V
C451	403 148 0305	ELECT 470U M 16V
C452	403 053 3606	ELECT 2200U M 35V
C453	403 071 5606	CERAMIC 220P K 50V
	403 057 1004	POLYESTER 0.01U K 50V
C455	403 091 9004	TA-SOLID 1U K 25V
C456	403 052 7308	ELECT 100U M 35V
C458	403 034 8804	CERAMIC 10P D 500V
C459	403 064 1301	POLYESTER 0.1U K 100V
C461	403 051 0607	ELECT 4.7U M 50V
C462	403 045 1504	ELECT 1000U M 25V
C463	403 064 6207	POLYESTER 0.033U K 100V
C482	403 043 0202	ELECT 220U M 16V
C492	403 057 0403	POLYESTER 0.01U K 50V
	403 057 1004	POLYESTER 0.01U K 50V
C493	403 046 1602	ELECT 3.3U M 25V
C550	403 069 8305	CERAMIC 0.01U Z 50V
C551	403 069 8305	CERAMIC 0.01U Z 50V
C552	403 069 8305	CERAMIC 0.01U Z 50V
C553	403 069 8305	CERAMIC 0.01U Z 50V
C554	403 024 0009	CERAMIC 39P J 50V
C556	403 069 8305	CERAMIC 0.01U Z 50V
C557	403 069 8305	CERAMIC 0.01U Z 50V
C558	403 069 8305	CERAMIC 0.01U Z 50V
C559	403 069 8305	CERAMIC 0.01U Z 50V
C560	403 069 8305	CERAMIC 0.01U Z 50V
C561	403 069 8305	CERAMIC 0.01U Z 50V
C562	403 069 8305	CERAMIC 0.01U Z 50V
C563	403 069 8305	CERAMIC 0.01U Z 50V
C564	403 069 8305	CERAMIC 0.01U Z 50V
C565	403 041 8804	ELECT 10U M 16V
C566	403 042 7707	ELECT 22U M 16V
C567	403 069 8305	CERAMIC 0.01U Z 50V
C568	403 042 2405	ELECT 100U M 16V
C569	403 061 8105	POLYESTER 4700P K 50V
	403 061 8808	POLYESTER 4700P K 50V
C570	403 046 1602	ELECT 3.3U M 25V
C571	403 026 0700	CERAMIC 47P J 50V
C572	403 069 8305	CERAMIC 0.01U Z 50V
C573	403 041 8804	ELECT 10U M 16V
C574	403 069 8305	CERAMIC 0.01U Z 50V
C576	403 041 8804	ELECT 10U M 16V
C577	403 069 8305	CERAMIC 0.01U Z 50V
C700	403 038 3409	ELECT 1000U M 6.3V
C701	403 038 3409	ELECT 1000U M 6.3V
C702	403 057 2803	POLYESTER 0.1U K 50V
C704	403 069 8305	CERAMIC 0.01U Z 50V
C707	403 069 8305	CERAMIC 0.01U Z 50V
C708	403 068 9006	CERAMIC 100P K 50V
C709	403 069 0507	CERAMIC 1000P K 50V
C710	403 056 7106	POLYESTER 1000P J 50V
	403 056 7700	POLYESTER 1000P J 50V
C711	403 072 7708	CERAMIC 330P K 50V
C712	403 072 7708	CERAMIC 330P K 50V
C713	403 072 7708	CERAMIC 330P K 50V
C714	403 012 4002	CERAMIC 15P J 50V
C715	403 017 7404	CERAMIC 22P J 50V
C731	403 062 0306	POLYESTER 0.047U K 50V
C741	403 069 8305	CERAMIC 0.01U Z 50V
C751	403 049 9803	ELECT 2.2U M 50V
C752	403 049 9803	ELECT 2.2U M 50V
C760	403 046 1602	ELECT 3.3U M 25V
C761	403 030 5104	CERAMIC 68P J 50V
C762	403 041 8804	ELECT 10U M 16V
C763	403 033 3305	CERAMIC 82P J 50V

Ref.No.	Part No.	Description
C764	403 041 8804	ELECT 10U M 16V
C766	403 041 8804	ELECT 10U M 16V
C767	403 019 7402	CERAMIC 27P J 50V
C782	403 048 6308	ELECT 0.47U M 50V
C783	403 048 6308	ELECT 0.47U M 50V
C785	403 051 0607	ELECT 4.7U M 50V
C789	403 071 1707	CERAMIC 180P K 50V
C790	403 073 6403	CERAMIC 470P K 50V
C811	403 041 8804	ELECT 10U M 16V
C812	403 041 8804	ELECT 10U M 16V
C813	403 041 8804	ELECT 10U M 16V
C814	403 042 2405	ELECT 100U M 16V
C815	403 069 8305	CERAMIC 0.01U Z 50V
C816	403 049 0008	ELECT 1U M 50V
C817	403 049 0008	ELECT 1U M 50V
C818	403 049 0008	ELECT 1U M 50V
C819	403 042 7707	ELECT 22U M 16V
C820	403 043 9106	ELECT 47U M 16V
C821	403 043 9106	ELECT 47U M 16V
C831	403 048 6308	ELECT 0.47U M 50V
C832	403 046 9905	ELECT 4.7U M 25V
C848	403 022 6003	CERAMIC 33P J 50V
RESISTER		
RC484	401 024 7004	CARBON 1K JA 1/6W
RD732	401 025 8208	CARBON 22K JA 1/6W
R100	401 024 6700	CARBON 100 JA 1/6W
R102	401 026 9907	CARBON 4.7K JA 1/6W
R103	401 024 7004	CARBON 1K JA 1/6W
R104	401 025 7409	CARBON 220 JA 1/6W
R105	401 025 7102	CARBON 22 JA 1/6W
R106	401 024 7004	CARBON 1K JA 1/6W
R107	401 027 2600	CARBON 5.6K JA 1/6W
R108	401 027 0309	CARBON 47K JA 1/6W
R109	401 024 7707	CARBON 100K JA 1/6W
R110	401 027 5205	CARBON 680 JA 1/6W
R111	401 026 9303	CARBON 47 JA 1/6W
R112	401 025 4200	CARBON 1.8K JA 1/6W
R113	401 012 4503	CARBON 100 JA 1/4W
R117	401 026 7606	CARBON 390K JA 1/6W
R120	401 026 9600	CARBON 470 JA 1/6W
R121	401 027 2600	CARBON 5.6K JA 1/6W
R122	401 024 7004	CARBON 1K JA 1/6W
R123	401 025 7409	CARBON 220 JA 1/6W
R124	401 024 7004	CARBON 1K JA 1/6W
R126	401 022 1905	CARBON 680 JA 1/4W
R127	401 027 2600	CARBON 5.6K JA 1/6W
R130	401 024 7004	CARBON 1K JA 1/6W
R131	401 027 2600	CARBON 5.6K JA 1/6W
R132	401 027 2600	CARBON 5.6K JA 1/6W
R133	401 027 2303	CARBON 560 JA 1/6W
R134	401 027 5205	CARBON 680 JA 1/6W
R137	401 026 1604	CARBON 270K JA 1/6W
R138	401 026 1604	CARBON 270K JA 1/6W
R139	401 025 8703	CARBON 220K JA 1/6W
R140	401 024 7004	CARBON 1K JA 1/6W
R141	401 024 7400	CARBON 10K JA 1/6W
R142	401 026 9907	CARBON 4.7K JA 1/6W
R143	401 024 7400	CARBON 10K JA 1/6W
R144	401 025 1902	CARBON 15K JA 1/6W
R145	401 026 9600	CARBON 470 JA 1/6W
R146	401 027 5205	CARBON 680 JA 1/6W
R147	401 024 7004	CARBON 1K JA 1/6W
R148	401 025 7409	CARBON 220 JA 1/6W
R149	401 024 8001	CARBON 1M JA 1/6W
R150	401 024 9701	CARBON 12K JA 1/6W
R151	401 027 2600	CARBON 5.6K JA 1/6W
R152	401 027 2600	CARBON 5.6K JA 1/6W
R153	401 025 7805	CARBON 2.2K JA 1/6W
R154	401 025 4606	CARBON 18K JA 1/6W

Ref. No.	Part No.	Description
R155	401 024 7400	CARBON 10K JA 1/6W
R156	401 024 7004	CARBON 1K JA 1/6W
R157	401 027 0309	CARBON 47K JA 1/6W
R158	401 027 2600	CARBON 5.6K JA 1/6W
R159	401 024 7400	CARBON 10K JA 1/6W
R160	401 027 8602	CARBON 8.2K JA 1/6W
R161	401 027 8305	CARBON 820 JA 1/6W
R162	401 027 5908	CARBON 68K JA 1/6W
R163	401 026 9907	CARBON 4.7K JA 1/6W
R164	401 027 2600	CARBON 5.6K JA 1/6W
R165	401 025 1605	CARBON 1.5K JA 1/6W
R166	401 026 4308	CARBON 3.3K JA 1/6W
R167	401 025 8703	CARBON 220K JA 1/6W
R171	401 026 3707	CARBON 33 JA 1/6W
R178	401 025 4903	CARBON 180K JA 1/6W
R179	401 024 7707	CARBON 100K JA 1/6W
R181	401 025 1902	CARBON 15K JA 1/6W
R183	401 025 1605	CARBON 1.5K JA 1/6W
R184	401 024 9701	CARBON 12K JA 1/6W
R185	401 024 6007	CARBON 1.5 JA 1/6W
R187	401 026 1604	CARBON 270K JA 1/6W
R188	401 027 0309	CARBON 47K JA 1/6W
R200	401 024 7400	CARBON 10K JA 1/6W
R201	401 025 1605	CARBON 1.5K JA 1/6W
R202	401 025 1605	CARBON 1.5K JA 1/6W
R203	401 024 7004	CARBON 1K JA 1/6W
R204	401 026 4308	CARBON 3.3K JA 1/6W
R205	401 026 0607	CARBON 270 JA 1/6W
R206	401 027 5502	CARBON 6.8K JA 1/6W
R212	401 025 8208	CARBON 22K JA 1/6W
R215	401 024 7400	CARBON 10K JA 1/6W
R216	401 027 8602	CARBON 8.2K JA 1/6W
R217	401 024 7400	CARBON 10K JA 1/6W
R230	401 027 9302	CARBON 820K JA 1/6W
R231	401 018 5801	CARBON 330K JA 1/4W
R232	401 024 7004	CARBON 1K JA 1/6W
R233	401 000 7509	SOLID 1.5K KA 1/2W
R235	401 025 8703	CARBON 220K JA 1/6W
R241	401 024 6700	CARBON 100 JA 1/6W
R244	401 024 7400	CARBON 10K JA 1/6W
R251	401 024 9305	CARBON 1.2K JA 1/6W
R255	401 024 7004	CARBON 1K JA 1/6W
R256	401 025 8208	CARBON 22K JA 1/6W
R261	401 026 9907	CARBON 4.7K JA 1/6W
R262	401 024 9701	CARBON 12K JA 1/6W
R263	401 025 8703	CARBON 220K JA 1/6W
R264	401 026 7606	CARBON 390K JA 1/6W
R281	401 026 6609	CARBON 390 JA 1/6W
R283	401 027 5205	CARBON 680 JA 1/6W
R284	401 027 2303	CARBON 560 JA 1/6W
R285	401 024 9008	CARBON 120 JA 1/6W
R301	401 008 8607	CARBON 220K JA 1/2W
R302	402 057 8204	WIRE WOUND 3.9 KA 6W
R311	401 027 2600	CARBON 5.6K JA 1/6W
R315	401 025 8208	CARBON 22K JA 1/6W
R317	401 027 2303	CARBON 560 JA 1/6W
R319	401 016 2604	CARBON 220 JA 1/4W
R320	401 000 5901	SOLID 120K KA 1/2W
R321	401 000 5901	SOLID 120K KA 1/2W
R322	401 014 5201	CARBON 15K JA 1/4W
R324	401 069 6208	OXIDE-MT 82 JA 2W
R325	401 069 1708	OXIDE-MT 68 JA 2W
R326	401 016 3304	CARBON 2.2K GA 1/4W
⚠R331	402 000 8305	SOLID 5.6M KA 1/2W
⚠R332	402 000 8305	SOLID 5.6M KA 1/2W
R352	401 012 8105	CARBON 100K JA 1/4W
R353	401 026 9907	CARBON 4.7K JA 1/6W
R354	401 025 2305	CARBON 150K JA 1/6W
R355	401 010 4307	CARBON 47K JA 1/2W
R356	401 025 8208	CARBON 22K JA 1/6W

Ref.No.	Part No.	Description
R361	401 066 2906	OXIDE-MT 2.2 JA 2W
R362	401 057 8009	OXIDE-MT 1 JA 1W
R363	401 064 6302	OXIDE-MT 10 JA 2W
R391	401 026 9600	CARBON 470 JA 1/6W
R392	401 025 8703	CARBON 220K JA 1/6W
R393	401 024 7400	CARBON 10K JA 1/6W
R401	401 025 8703	CARBON 220K JA 1/6W
R402	401 026 0607	CARBON 270 JA 1/6W
R411	401 024 7004	CARBON 1K JA 1/6W
R412	401 009 1508	CARBON 2.7K JA 1/2W
R420	401 007 4709	CARBON 1.2K JA 1/2W
R421	401 025 1605	CARBON 1.5K JA 1/6W
R422	401 025 8703	CARBON 220K JA 1/6W
R431	401 026 3905	CARBON 330 JA 1/6W
R432	401 024 7004	CARBON 1K JA 1/6W
R433	401 012 5708	CARBON 1K JA 1/4W
R434	401 009 9306	CARBON 390 JA 1/2W
R435	402 055 4307	WIRE WOUND 10 KA 6W
R441	401 007 1104	CARBON 1K JA 1/2W
R442	401 025 8703	CARBON 220K JA 1/6W
R446	401 024 8001	CARBON 1M JA 1/6W
R450	401 025 1605	CARBON 1.5K JA 1/6W
R451	401 025 1100	CARBON 15 JA 1/6W
R452	401 026 1307	CARBON 27K JA 1/6W
R453	401 027 5502	CARBON 6.8K JA 1/6W
R454	401 027 5908	CARBON 68K JA 1/6W
R455	401 026 1307	CARBON 27K JA 1/6W
R456	401 024 7004	CARBON 1K JA 1/6W
R457	401 026 8108	CARBON 4.7 JA 1/6W
R461	401 024 9701	CARBON 12K JA 1/6W
R462	401 024 9701	CARBON 12K JA 1/6W
R463	401 025 1902	CARBON 15K JA 1/6W
R465	401 006 8807	CARBON 1.8 JA 1/2W
R467	401 007 1104	CARBON 1K JA 1/2W
R468	401 009 5803	CARBON 330 JA 1/2W
R474	401 024 7400	CARBON 10K JA 1/6W
R481	401 057 6807	OXIDE-MT 0.68 JA 1W
R482	401 061 0006	OXIDE-MT 3.3 JA 1W
R483	401 026 4308	CARBON 3.3K JA 1/6W
R491	401 027 5502	CARBON 6.8K JA 1/6W
R495	401 024 7400	CARBON 10K JA 1/6W
R496	401 026 9600	CARBON 470 JA 1/6W
R551	401 009 9306	CARBON 390 JA 1/2W
R552	401 009 9306	CARBON 390 JA 1/2W
R553	401 027 2600	CARBON 5.6K JA 1/6W
R554	401 027 5502	CARBON 6.8K JA 1/6W
R556	401 022 6801	CARBON 75 JA 1/4W
R557	401 026 7408	CARBON 39K JA 1/6W
R558	401 026 7408	CARBON 39K JA 1/6W
R561	401 024 6700	CARBON 100 JA 1/6W
R563	401 026 4308	CARBON 3.3K JA 1/6W
R564	401 025 7409	CARBON 220 JA 1/6W
R566	401 024 6700	CARBON 100 JA 1/6W
R567	401 024 7400	CARBON 10K JA 1/6W
R568	401 026 4308	CARBON 3.3K JA 1/6W
R569	401 025 3807	CARBON 180 JA 1/6W
R570	401 026 9907	CARBON 4.7K JA 1/6W
R571	401 026 7002	CARBON 3.9K JA 1/6W
R572	401 027 2600	CARBON 5.6K JA 1/6W
R573	401 027 2600	CARBON 5.6K JA 1/6W
R574	401 024 7004	CARBON 1K JA 1/6W
R575	401 024 7400	CARBON 10K JA 1/6W
R576	401 027 8602	CARBON 8.2K JA 1/6W
R577	401 027 8602	CARBON 8.2K JA 1/6W
R579	401 026 1000	CARBON 2.7K JA 1/6W
R701	401 059 6706	OXIDE-MT 180 JA 1W
R702	401 024 7400	CARBON 10K JA 1/6W
R703	401 026 9907	CARBON 4.7K JA 1/6W
R704	401 024 7400	CARBON 10K JA 1/6W
R705	401 027 5908	CARBON 68K JA 1/6W

Ref. No.	Part No.	Description
R706	401 027 5908	CARBON 68K JA 1/6W
R707	401 027 0309	CARBON 47K JA 1/6W
R708	401 024 7400	CARBON 10K JA 1/6W
R709	401 025 4200	CARBON 1.8K JA 1/6W
R710	401 026 7606	CARBON 390K JA 1/6W
R711	401 027 3201	CARBON 560K JA 1/6W
R712	401 024 6700	CARBON 100 JA 1/6W
R713	401 024 7400	CARBON 10K JA 1/6W
R714	401 024 7400	CARBON 10K JA 1/6W
R715	401 019 1901	CARBON 3.9K JA 1/4W
R716	401 027 3003	CARBON 56K JA 1/6W
R717	401 025 8208	CARBON 22K JA 1/6W
R718	401 025 1902	CARBON 15K JA 1/6W
R719	401 027 8602	CARBON 8.2K JA 1/6W
R721	401 025 1605	CARBON 1.5K JA 1/6W
R722	401 027 8602	CARBON 8.2K JA 1/6W
R723	401 026 9907	CARBON 4.7K JA 1/6W
R725	401 024 7004	CARBON 1K JA 1/6W
R726	401 024 7004	CARBON 1K JA 1/6W
R727	401 024 7004	CARBON 1K JA 1/6W
R728	401 024 7004	CARBON 1K JA 1/6W
R729	401 025 7805	CARBON 2.2K JA 1/6W
R730	401 025 7805	CARBON 2.2K JA 1/6W
R731	401 024 7400	CARBON 10K JA 1/6W
R733	401 025 8208	CARBON 22K JA 1/6W
R734	401 027 0309	CARBON 47K JA 1/6W
R735	401 027 2600	CARBON 5.6K JA 1/6W
R736	401 025 8208	CARBON 22K JA 1/6W
R737	401 024 7400	CARBON 10K JA 1/6W
R738	401 027 2600	CARBON 5.6K JA 1/6W
R739	401 026 9907	CARBON 4.7K JA 1/6W
R740	401 025 8208	CARBON 22K JA 1/6W
R741	401 024 7707	CARBON 100K JA 1/6W
R742	401 024 7707	CARBON 100K JA 1/6W
R743	401 024 7707	CARBON 100K JA 1/6W
R744	401 025 7409	CARBON 220 JA 1/6W
R745	401 024 7004	CARBON 1K JA 1/6W
R746	401 024 9305	CARBON 1.2K JA 1/6W
R747	401 024 7004	CARBON 1K JA 1/6W
R748	401 024 7004	CARBON 1K JA 1/6W
R749	401 024 7004	CARBON 1K JA 1/6W
R750	401 024 7004	CARBON 1K JA 1/6W
R751	401 027 2600	CARBON 5.6K JA 1/6W
R752	401 027 2600	CARBON 5.6K JA 1/6W
R753	401 026 4605	CARBON 33K JA 1/6W
R754	401 024 7004	CARBON 1K JA 1/6W
R755	401 026 4605	CARBON 33K JA 1/6W
R756	401 024 7004	CARBON 1K JA 1/6W
R757	401 024 7004	CARBON 1K JA 1/6W
R758	401 027 5502	CARBON 6.8K JA 1/6W
R759	401 025 8208	CARBON 22K JA 1/6W
R761	401 026 9600	CARBON 470 JA 1/6W
R762	401 024 7400	CARBON 10K JA 1/6W
R763	401 027 9005	CARBON 82K JA 1/6W
R764	401 025 4200	CARBON 1.8K JA 1/6W
R765	401 027 2303	CARBON 560 JA 1/6W
R766	401 027 2303	CARBON 560 JA 1/6W
R767	401 026 9600	CARBON 470 JA 1/6W
R768	401 025 1902	CARBON 15K JA 1/6W
R769	401 026 7408	CARBON 39K JA 1/6W
R770	401 025 7805	CARBON 2.2K JA 1/6W
R771	401 026 4308	CARBON 3.3K JA 1/6W
R772	401 025 4606	CARBON 18K JA 1/6W
R773	401 026 9907	CARBON 4.7K JA 1/6W
R774	401 025 4606	CARBON 18K JA 1/6W
R775	401 026 1307	CARBON 27K JA 1/6W
R776	401 025 4606	CARBON 18K JA 1/6W
R778	401 026 9907	CARBON 4.7K JA 1/6W
R779	401 026 7002	CARBON 3.9K JA 1/6W
R780	401 026 4605	CARBON 33K JA 1/6W

Ref.No.	Part No.	Description
R781	401 027 0309	CARBON 47K JA 1/6W
R785	401 027 2600	CARBON 5.6K JA 1/6W
R786	401 027 2600	CARBON 5.6K JA 1/6W
R787	401 027 2600	CARBON 5.6K JA 1/6W
R788	401 025 8208	CARBON 22K JA 1/6W
R789	401 026 1307	CARBON 27K JA 1/6W
R790	401 026 4605	CARBON 33K JA 1/6W
R791	401 025 8208	CARBON 22K JA 1/6W
R792	401 026 9600	CARBON 470 JA 1/6W
R793	401 025 8208	CARBON 22K JA 1/6W
R794	401 025 7409	CARBON 220 JA 1/6W
R795	401 064 9907	OXIDE-MT 10K JA 2W
R796	401 025 7805	CARBON 2.2K JA 1/6W
R800	401 025 2305	CARBON 150K JA 1/6W
R801	401 024 6700	CARBON 100 JA 1/6W
R802	401 024 6700	CARBON 100 JA 1/6W
R803	401 024 6700	CARBON 100 JA 1/6W
R811	401 027 2600	CARBON 5.6K JA 1/6W
R812	401 027 2600	CARBON 5.6K JA 1/6W
R813	401 027 2303	CARBON 560 JA 1/6W
R814	401 024 7707	CARBON 100K JA 1/6W
R815	401 024 7707	CARBON 100K JA 1/6W
R816	401 022 6801	CARBON 75 JA 1/4W
R817	401 022 6801	CARBON 75 JA 1/4W
R818	401 022 6801	CARBON 75 JA 1/4W
R819	401 022 6801	CARBON 75 JA 1/4W
R820	401 026 4308	CARBON 3.3K JA 1/6W
R821	401 027 6608	CARBON 75 JA 1/6W
R822	401 022 6801	CARBON 75 JA 1/4W
R823	401 025 8208	CARBON 22K JA 1/6W
R824	401 024 9701	CARBON 12K JA 1/6W
R825	401 026 9907	CARBON 4.7K JA 1/6W
R826	401 024 9305	CARBON 1.2K JA 1/6W
R827	401 024 7004	CARBON 1K JA 1/6W
R828	401 024 9305	CARBON 1.2K JA 1/6W
R834	401 027 5908	CARBON 68K JA 1/6W
R837	401 024 7400	CARBON 10K JA 1/6W
R838	401 026 4308	CARBON 3.3K JA 1/6W
R840	401 024 7707	CARBON 100K JA 1/6W
R841	401 025 1902	CARBON 15K JA 1/6W
R842	401 026 4605	CARBON 33K JA 1/6W
R843	401 027 0309	CARBON 47K JA 1/6W
R844	401 026 1000	CARBON 2.7K JA 1/6W
R845	401 024 7400	CARBON 10K JA 1/6W
R846	401 025 1902	CARBON 15K JA 1/6W
R847	401 024 7400	CARBON 10K JA 1/6W
R848	401 027 5908	CARBON 68K JA 1/6W
R849	401 009 5803	CARBON 330 JA 1/2W
R850	401 024 7004	CARBON 1K JA 1/6W
R851	401 025 1308	CARBON 150 JA 1/6W
R852	401 024 7004	CARBON 1K JA 1/6W
R853	401 026 9303	CARBON 47 JA 1/6W
R854	401 024 6700	CARBON 100 JA 1/6W
R855	401 024 6700	CARBON 100 JA 1/6W
R856	401 024 6700	CARBON 100 JA 1/6W
R857	401 027 2600	CARBON 5.6K JA 1/6W
R858	401 025 8208	CARBON 22K JA 1/6W
R859	401 027 5502	CARBON 6.8K JA 1/6W
R861	401 027 8602	CARBON 8.2K JA 1/6W
R862	401 024 7004	CARBON 1K JA 1/6W

VARIABLE RESISTER

VC121	610 003 0374	TRIMMER CONDENSER	
VC131	610 002 7671	TRIMMER CONDENSER	
VC571	610 002 7541	TRIMMER	
VR101	610 019 3901	VR	B-10K
VR121	610 019 3864	VR	B-1K
VR151	610 019 3895	VR	B-5K
VR211	610 019 3932	VR	B-50K
VR281	610 019 3864	VR	B-1K

Ref. No.	Part No.	Description	
VR351	610 019 3871	VR	B-2K
VR411	610 019 3918	VR	B-20K
VR451	610 019 3932	VR	B-50K
VR710	610 019 3888	VR	B-3K
TRANSFORMER			
T101	610 037 5727	S TRANS	
T102	610 037 7103	S TRANS	
T121	610 037 4522	S COIL	
T131	610 037 6557	S TRANS	
	610 037 6564	S TRANS	
T281	610 037 7028	S TRANS	
⚠T311	610 216 4534	CONVERTER TRANS	
⚠T371	610 033 3765	POWER TRANS	
T431	610 000 1060	DRIVE TRANS	
	610 000 1053	DRIVE TRANS	
⚠T471	610 232 5768	FBT	
T551	610 037 7400	S TRANS	
T552	610 037 7394	S TRANS	
T561	610 037 7417	S TRANS	
T571	610 037 4522	S COIL	
COIL			
LJ211	610 031 3057	PEAKING COIL	
L121	610 031 3958	PEAKING COIL	
L122	610 029 6022	PEAKING COIL 15UH K	
	610 210 3410	PEAKING COIL 15UHK	
	610 029 8224	PEAKING COIL 15UH K	
L141	610 029 6022	PEAKING COIL 15UH K	
	610 210 3410	PEAKING COIL 15UHK	
	610 029 8224	PEAKING COIL 15UH K	
L161	610 029 6022	PEAKING COIL 15UH K	
	610 210 3410	PEAKING COIL 15UHK	
	610 029 8224	PEAKING COIL 15UH K	
L201	610 030 0873	DELAY LINE	
L211	610 037 4546	S COIL	
L221	610 029 5926	PEAKING COIL 10UH K	
	610 210 3366	PEAKING COIL 10UHK	
	610 029 8125	PEAKING COIL 10UH K	
L251	610 031 4177	PEAKING COIL	
L281	610 031 4290	PEAKING COIL 8.2UHK	
L282	610 032 6699	1H DELAYLINE	
	610 032 6705	1H DELAYLINE	
L283	610 210 3465	PEAKING COIL 2.7UHK	
	610 029 8323	PEAKING COIL 2.7UH K	
⚠L301	610 212 6013	LINE FILTER	
⚠L302	610 031 5945	LINE FILTER	
	610 031 5969	LINE FILTER	
	610 213 9563	LINE FILTER	
	610 223 5722	LINE FILTER	
⚠L303	610 031 5945	LINE FILTER	
	610 031 5969	LINE FILTER	
	610 213 9563	LINE FILTER	
	610 223 5722	LINE FILTER	
L441	610 000 0704	LINEARITY COIL	
L442	610 203 9078	COIL	
L451	610 031 3156	PEAKING COIL	
	610 210 3809	PEAKING COIL 18UHK	
L551	610 031 4436	PEAKING COIL	
L781	610 031 3873	PEAKING COIL 10UHK	
L801	610 031 3873	PEAKING COIL 10UHK	
DIODE			
D110	407 048 5606	ZENER DIODE EQA02-10A	
D121	407 088 2603	DIODE 1SS265	
D131	407 088 2603	DIODE 1SS265	
D132	407 007 9904	DIODE GMA01	
	407 012 4406	DIODE 1SS133	
	407 012 5809	DIODE 1SS176	
D141	407 007 9904	DIODE GMA01	

Ref.No.	Part No.	Description
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D142	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D171	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D230	407 075 9905	ZENER DIODE EQA03-11A
D231	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D242	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D243	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D244	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D303	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D304	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D305	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D306	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
	407 064 6908	DIODE TVR4N(X)
D314	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
⚠D315	407 105 8700	PHOTO COUPLE PC113B
	408 009 8407	PHOTO COUPLE CNY17F-30PT6
D316	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D317	407 007 6606	DIODE ES1
	407 007 6903	DIODE ES1Z
	408 009 9008	DIODE BYD33D
D351	407 007 7702	DIODE EU2A
	408 009 9206	DIODE BYD33J
	407 064 7004	DIODE 1S1835
D352	407 005 9500	DIODE ERA21-06
	407 007 7108	DIODE EU01A
D353	407 007 6606	DIODE ES1
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D354	407 095 8407	DIODE RU4Y LF-K2
D355	407 007 6606	DIODE ES1
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D361	407 048 2407	ZENER DIODE EQA02-06E
	407 048 2605	ZENER DIODE EQA02-06F
D371	407 005 7308	DIODE EM01Z
	407 006 1008	DIODE ERB12-02RK
D391	408 008 2406	DIODE 1N4148
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A

Ref. No.	Part No.	Description
	407 013 6508	DIODE 1S2471
D392	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D394	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D411	407 048 5606	ZENER DIODE EQA02-10A
	407 048 5804	ZENER DIODE EQA02-10B
D441	407 006 3903	DIODE ERB43-04
	407 011 4407	DIODE TVR1G
D445	407 118 2207	ZENER DIODE 1Z75
D451	407 005 7308	DIODE EM01Z
	407 006 1008	DIODE ERB12-02RK
	408 009 9008	DIODE BYD33D
D452	407 007 7801	DIODE EU2Z
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D453	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D481	407 048 2001	ZENER DIODE EQA02-06B
D482	407 007 6606	DIODE ES1
	408 009 9305	DIODE BYD33G
	407 013 1909	DIODE 1S1834
D484	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D491	407 048 1103	ZENER DIODE EQA02-05D
	407 048 1202	ZENER DIODE EQA02-05E
D493	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D494	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D495	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D551	407 088 2603	DIODE 1SS265
D552	407 088 2603	DIODE 1SS265
D571	407 088 2603	DIODE 1SS265
D701	407 048 1103	ZENER DIODE EQA02-05D
	407 048 1202	ZENER DIODE EQA02-05E
D702	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D704	407 116 6504	LED SLP-181B-51
D711	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D712	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D721	407 055 7907	ZENER DIODE RD3.6EL
D731	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D741	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D742	407 007 9904	DIODE GMA01

Ref.No.	Part No.	Description
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D751	407 005 4505	DIODE DS442X
	408 008 2406	DIODE 1N4148
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
D781	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D791	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D792	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D811	407 075 9905	ZENER DIODE EQA03-11A
D812	407 075 9905	ZENER DIODE EQA03-11A
D813	407 075 9905	ZENER DIODE EQA03-11A
D814	407 075 9905	ZENER DIODE EQA03-11A
D815	407 075 9905	ZENER DIODE EQA03-11A
D816	407 075 9905	ZENER DIODE EQA03-11A
D818	407 075 9905	ZENER DIODE EQA03-11A
D819	407 075 9905	ZENER DIODE EQA03-11A
D821	407 075 9905	ZENER DIODE EQA03-11A
D822	407 075 9905	ZENER DIODE EQA03-11A
D824	407 075 9905	ZENER DIODE EQA03-11A
D825	407 075 9905	ZENER DIODE EQA03-11A
MISCELLANEUS		
⚠F301	423 006 4801	FUSE 250V 2.5A
	423 006 4702	FUSE 250V 2.5A
TH110	407 015 0405	THERMISTOR SDT-35-CTV
TH710	407 015 0405	THERMISTOR SDT-35-CTV
A101	610 227 3854	UV VARACTOR TUNER
A701	610 214 4833	RC PREAMP 409-1F
	610 224 5806	RC PREAMP 409-1F
⚠PS301	408 003 6805	THERMISTOR 902P44E180MR14
	408 000 3906	TH PTH451A13BG180M270
SW251	610 011 2728	LEVER SWITCH
⚠SW301	610 218 9162	PUSH SWITCH
SW451	610 011 2728	LEVER SWITCH
SW701	610 011 4432	PUSH SWITCH
SW702	610 011 4432	PUSH SWITCH
SW703	610 011 4432	PUSH SWITCH
SW704	610 011 4432	PUSH SWITCH
SW705-10	610 011 4463	PUSH SWITCH
X101	421 002 8304	SAW F TSF5333
X121	610 015 2854	CERAMIC FILTER
X122	610 015 3011	CERAMIC FILTER
X143	610 015 2878	CERAMIC FILTER
X161	610 216 7245	CERAMIC FILTER
X201	610 012 0495	CRYSTAL OSCILLATOR
	610 012 0501	CRYSTAL OSCILLATOR
	610 204 4188	CRYSTAL OSCILLATOR
	610 012 0525	CRYSTAL OSCILLATOR
X251	610 012 2222	CERAMIC TRAP
	610 226 6894	CERAMIC TRAP
X421	610 216 6149	CERAMIC OSCILLATOR
X551	421 000 3103	SAW F TSB2305
X701	610 012 2857	CERAMIC OSCILLATOR
	610 212 8765	CERAMIC OSCILLATOR

610 231 3222 SECAM PCB ASSY E4WA UE2424

TRANSISTER		
Q1301	405 015 8704	TR 2SC2812-L6-TA
Q1303	405 015 8704	TR 2SC2812-L6-TA
Q1341	405 015 8704	TR 2SC2812-L6-TA
Q1357	405 015 8704	TR 2SC2812-L6-TA

Ref. No.	Part No.	Description
	INTEGRATED CIRCUIT	
IC1301	409 000 9707	IC AN5635N-A
	CAPACITOR	
C1301	403 134 6007	ELECT 330U M 16V
C1302	403 061 4008	POLYESTER 0.039U K 50V
C1303	403 125 6900	CERAMIC 27P J 50V
C1304	403 022 9004	CERAMIC 33P J 50V
C1305	403 069 9609	CERAMIC 0.01U Z 50V
C1306	403 217 1509	CERAMIC 270P J 50V
C1307	403 030 7801	CERAMIC 68P J 50V
C1308	403 069 9609	CERAMIC 0.01U Z 50V
C1309	403 069 9609	CERAMIC 0.01U Z 50V
C1310	403 009 6309	CERAMIC 100P J 50V
C1311	403 033 9208	CERAMIC 820P J 50V
C1312	403 109 6308	ELECT 1U M 50V
C1313	403 069 9609	CERAMIC 0.01U Z 50V
C1314	403 069 9609	CERAMIC 0.01U Z 50V
C1315	403 033 5309	CERAMIC 82P J 50V
C1316	403 071 6603	CERAMIC 220P K 50V
C1317	403 018 1203	CERAMIC 22P J 50V
C1318	403 109 6308	ELECT 1U M 50V
C1319	403 109 6308	ELECT 1U M 50V
C1321	403 107 9905	ELECT 10U M 16V
C1322	403 107 9905	ELECT 10U M 16V
C1325	403 107 9905	ELECT 10U M 16V
C1326	403 107 9905	ELECT 10U M 16V
C1331	403 026 3602	CERAMIC 47P J 50V
C1332	403 069 9609	CERAMIC 0.01U Z 50V
C1333	403 069 9609	CERAMIC 0.01U Z 50V
C1334	403 028 5000	CERAMIC 56P J 50V
C1335	403 013 3400	CERAMIC 150P J 50V
C1336	403 125 6603	CERAMIC 18P J 50V
C1337	403 069 9609	CERAMIC 0.01U Z 50V
C1338	403 033 5309	CERAMIC 82P J 50V
C1339	403 024 2706	CERAMIC 39P J 50V
C1341	403 069 9609	CERAMIC 0.01U Z 50V
C1342	403 069 9609	CERAMIC 0.01U Z 50V
C1361	403 071 6603	CERAMIC 220P K 50V
C1362	403 071 6603	CERAMIC 220P K 50V
C1363	403 071 6603	CERAMIC 220P K 50V
	RESISTER	
R1300	401 037 0108	MT-GLAZE 5.6K JA 1/8W
R1301	401 036 3100	MT-GLAZE 27K JA 1/8W
R1302	401 036 5104	MT-GLAZE 33K JA 1/8W
R1303	401 035 4900	MT-GLAZE 1K JA 1/8W
R1304	401 036 1403	MT-GLAZE 220 JA 1/8W
R1305	401 036 8303	MT-GLAZE 4.7K JA 1/8W
R1306	401 036 2806	MT-GLAZE 2.7K JA 1/8W
R1307	401 037 0405	MT-GLAZE 56K JA 1/8W
R1308	401 036 3308	MT-GLAZE 270K JA 1/8W
R1309	401 036 0000	MT-GLAZE 180K JA 1/8W
R1313	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1314	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1321	401 035 6805	MT-GLAZE 1.2K JA 1/8W
R1323	401 035 6805	MT-GLAZE 1.2K JA 1/8W
R1325	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1326	401 036 1601	MT-GLAZE 2.2K JA 1/8W
R1331	401 036 1403	MT-GLAZE 220 JA 1/8W
R1332	401 036 9904	MT-GLAZE 560 JA 1/8W
R1333	401 037 3703	MT-GLAZE 820 JA 1/8W
R1334	401 036 4800	MT-GLAZE 3.3K JA 1/8W
R1335	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1337	401 035 5204	MT-GLAZE 10K JA 1/8W
R1341	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1342	401 037 3703	MT-GLAZE 820 JA 1/8W
R1343	401 037 0405	MT-GLAZE 56K JA 1/8W
R1344	401 036 1700	MT-GLAZE 22K JA 1/8W
R1345	401 037 0108	MT-GLAZE 5.6K JA 1/8W

Ref.No.	Part No.	Description
R1346	401 036 8303	MT-GLAZE 4.7K JA 1/8W
R1353	401 035 5204	MT-GLAZE 10K JA 1/8W
R1354	401 035 9806	MT-GLAZE 18K JA 1/8W
R1355	401 035 9301	MT-GLAZE 1.8K JA 1/8W
R1356	401 037 0108	MT-GLAZE 5.6K JA 1/8W
R1357	401 035 5204	MT-GLAZE 10K JA 1/8W
R1361	401 035 7703	MT-GLAZE 150 JA 1/8W
R1362	401 035 7703	MT-GLAZE 150 JA 1/8W
R1363	401 035 7703	MT-GLAZE 150 JA 1/8W
	VARIABLE RESISTER	
VR1301	610 019 3871	VR B-2K
	TRANSFORMER	
T1301	610 037 5819	S TRANS
T1302	610 037 4546	S COIL
T1303	610 037 4546	S COIL
T1304	610 037 4546	S COIL
	COIL	
L1301	610 029 5292	PEAKING COIL
L1302	610 029 5421	PEAKING COIL
L1303	610 029 5346	PEAKING COIL
L1304	610 226 8201	PEAKING COIL
L1305	610 029 5346	PEAKING COIL
	DIODE	
D1301	407 004 8009	DIODE DSB015-TA
D1302	407 143 0100	DIODE 1K188FM-1(MS)
	407 102 6006	DIODE 1S188-TV-M
D1334	407 004 8009	DIODE DSB015-TA
D1353	407 004 8009	DIODE DSB015-TA
	MISCELLANEUS	
K13A	610 224 9293	PCB MTG BRKT-B-E3HB
K13KM	610 225 2392	TERMINAL 8P
K13KO	610 213 8085	TERMINAL 10P

OUT OF CIRCUIT BOARD

	PICTURE TUBE	
⚠Q901	414 001 0806	CRT A41EAM01X01
	COIL	
⚠L901	610 205 3692	DEGAUSSING COIL
	610 205 3708	DEGAUSSING COIL
	MISCELLANEUS	
SP901	610 055 6614	SPEAKER
	610 215 6089	SPEAKER
⚠W901	610 011 9864	AC CORD
W902	610 208 3927	GROUNDING CONNECTOR-D8TC
	610 024 2098	GROUNDING CONNECTOR

SANYO

Service Manual supplement-1

Colour Television

Model No: CEM2151F
CEM2161F
CEM2161F
CEM1761F

Give complete "SERVICE REF.NO." for parts order or servicing, it is shown on the rating sheet on the Cabinet Back Cover.

(FRANCE)

Service Ref No. CEM2151F-01
CEM2161F-01
CEM2167F-00
CEM1761F-01

PRODUCT CODE:
1113 096 02 (CEM2151F-01)
1113 096 00 (CEM2161F-01)
1113 096 10 (CEM2167F-00)
1113 095 00 (CEM1761F-01)
Chassis No. F6-A 21/17

NOTE

Model CEM2167-00 is the same as model CEM2161F-01 except for the Cabinet parts list. Please refer to all information for CEM2161f-01 for all electrical Parts List.

NOTE

This model is modified as follows. Refer to CEM2151F-00 CEM2161F-00/ CEM1761F-00 Service Manual for all the items not given in this manual.

FILING Instructions

Filing this supplement-1 with the original service manual of model CEM2151F/ CEM2161F/ CEM1761F.

Cabinet Parts List

The rating sheet is changed as follows:

CEM2151F-00	**CEM2151F-01**
610 233 1974 ⟶	610 241 2093
CEM2161F-00	**CEM2161F-01**
610 231 5271 ⟶	610 241 2079
CEM1761F-00	**CEM1761F-01**
610 231 5288 ⟶	610 241 2086

Contents:

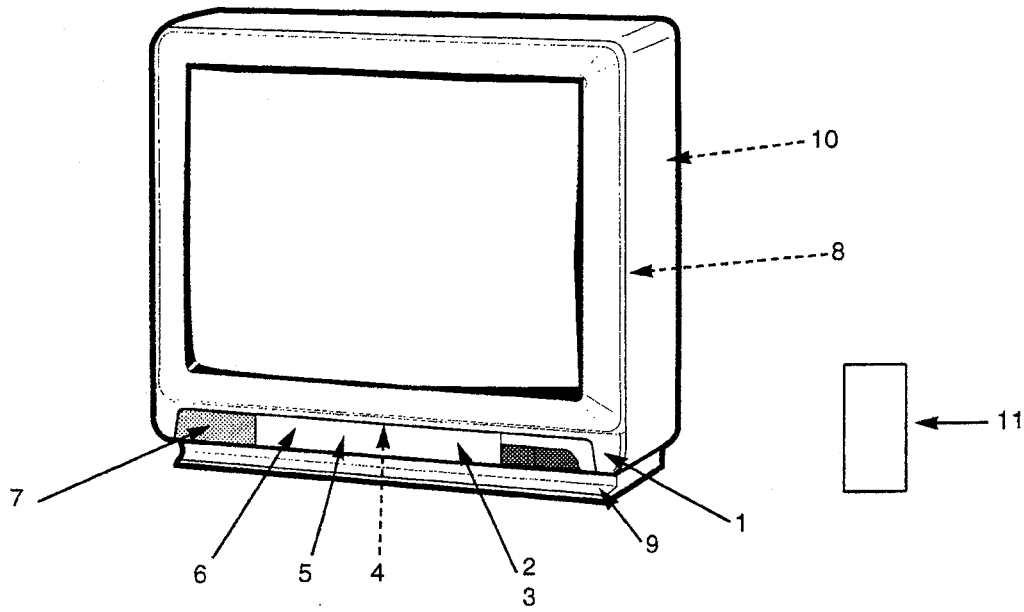
Page 1. Cabinet Parts List
Ser Ref No. 00 ⟶ 01
Page 2. Cabinet Parts List
-CEM2167F-00
Page 3. Electrical differences
Ser Ref No. 00 ⟶ 01

E4WA

SK SM1004

CABINET PARTS LIST FOR CEM2167F

Note: Parts order must contain Model No., Part No. and Description.



Key No.	Part No.	Description
1.	610 244 5862	Decoration board - E5RR
2.	610 240 6139	Power button - E5RH
3.	610 210 7320	Spring (For Power button)
4.	610 248 4021	Control dec sheet - E4WL
5.	610 104 2505	Push Latch
6.	610 248 3918	Door - E4WL
7.	610 240 9390	Speaker grill - E5JV
8.	610 248 4250	Cabinet Assy - E4WL
9.	610 098 2659	Cabinet feet (2 used)
10.	610 214 9821	Back Cover - E4PC
	610 098 2659	Back Cover feet (2 used)
	610 244 5589	Hole Cover - E4WL
11.	610 231 8395	Remote control transmitter - JXLB
	610 230 0307	RC Battery Lid - JXLA

Differences

Refer to the new parts list for parts order.

Page & Section	Ref. No.	Service Ref. No. CEM2151F-00 / Service Ref. No. CEM2161F-00 Part No. Description		Service Ref. No. CEM2151F-01 / Service Ref. No. CEM2161F-01 Part No. Description	Q'ty	Interchange ability
		610 231 3208 MAIN PCB ASSY E4WA (UE2422)		610 240 7549 MAIN PCB ASSY E4WA-A (UE2422A)		
	L141	Peaking Coil (15µH)	→	None		No
	C141	Capacitor (33pF 50V)	→	None		No
	C144	Capacitor (22pF 50V)	→	None		No
	D751	Diode (1S1555)	→	None		No
	D752	None	→	Diode (1S1555)	1	No
	J178/9	Jumper lead	→	None		No
	J180	None	→	Jumper lead	1	No
		610 231 3222 SECAM PCB ASSY E4WA (UE2424)		610 240 4234 SECAM PCB ASSY E3BF (UE2424B)		
	R1309	Resistor (180KΩ 1/8W)	→	Resistor (390KΩ 1/8W)	1	No
				610 236 9731 SIF PCB ASSY E3YF (UE2536)		

Page & Section	Ref. No.	Service Ref. No. CEM1761F-00 Part No. Description		Service Ref. No. CEM1761F-01 Part No. Description	Q'ty	Interchange ability
		610 231 3215 MAIN PCB ASSY E4VA (UE2423)		610 240 7556 MAIN PCB ASSY E4VA-A (UE2423A)		
	L141	Peaking Coil (15µH)	→	None		No
	C141	Capacitor (33pF 50V)	→	None		No
	C144	Capacitor (22pF 50V)	→	None		No
	D751	Diode (1S1555)	→	None		No
	D752	None	→	Diode (1S1555)	1	No
	J178/9	Jumper lead	→	None		No
	J180	None	→	Jumper lead	1	No
		610 231 3222 SECAM PCB ASSY E4WA (UE2424)		610 240 4234 SECAM PCB ASSY E3BF (UE2424B)		
	R1309	Resistor (180KΩ 1/8W)	→	Resistor (390KΩ 1/8W)	1	No
				610 236 9731 SIF PCB ASSY E3YF (UE2536)		

IC701

ON-SCREEN BLANKING OUTPUT	1	OUT (0.1V)	Vcc (5V)	42	+5 volts Supply
ON-SCREEN (NOT USED) DISPLAY OUTPUT	2	B	OSC2 (0.4V)	41	ON-SCREEN DISPLAY OSCILLATOR(5MHZ)
ON-SCREEN BLANKING OUTPUT	3	G (0.03V)	OSC1 (0.5V)	40	
	4	R	Hsync (4.5V)	39	ON-SCREEN DISPLAY(ACTIVE:LOW) HORIZONTAL SYNCHRONISATION PULSE.
TV/AV MODE OUTPUT (H:TV L:AV MODE)	5	P4 (5V)	Vsync (5.4V)	38	ON-SCREEN DISPLAY(ACTIVE:LOW) VERTICAL SYNCHRONISATION PULSE.
	6	P62 (5.4V)	P21	37	TEXT CONTROL (DATA OUTPUT)
RESET INPUT (ACTIVE:LOW)	7	RESET (5.4V)	P20	36	TEXT CONTROL (CLOCK OUTPUT)
AFT SIGNAL INPUT (NOT USED)	8	P51 (1.5V)	X OUT (2.4V)	35	SYSTEM CLOCK OSCILLATOR (4MHZ)
TIME BASE INPUT	9	P50 (4.4V)	X IN (2.3V)	34	
VOLUME CONTROL OUTPUT(ACTIVE:HIGH)	10	VDP0 (0.2V)	P61 (2.9V)	33	SKEW OUT PUT (H:OFF,L:ON)
COLOUR CONTROL OUTPUT(ACTIVE:HIGH)	11	VDP1 (4.7V)	P12 (2V)	32	BAND OUTPUT
BRIGHTNESS CONTROL OUTPUT(ACTIVE:HIGH)	12	VDP2 (4.4V)	P11 (0V)	31	
CONTRAST CONTROL OUTPUT(ACTIVE:HIGH)	13	VDP3 (10.3V)	P10 (5.5V)	30	
REMOTE CONTROL INPUT(ACTIVE:LOW)	14	P53 (5.4V)	P03 (0V)	29	KEY SCAN & SYSTEM CHANGE OUTPUT
OVER LOAD DETECT (L:WRONG)	15	P60 (5.4V)	P02 (0V)	28	
AFT ON/OFF (H:OFF, L:ON)	16	P70 (0V)	P01 (0V)	27	KEY SCAN OUTPUT (ACTIVE:LOW)
POWER ON/OFF (H:OFF, L:ON)	17	P71 (0V)	P00 (0V)	26	
	18	P72 (0V)	P33 (5.4V)	25	KEY SCAN INPUT (ACTIVE:LOW)
GND	19	TEST (0V)	P32 (0.6V)	24	
TUNING VOLTAGE OUTPUT	20	D/A (4V)	P31 (5.4V)	23	
GND	21	Vss (0V)	P30 (5.4V)	22	

IC710

12V 3V 12V 13.5V 0.03V 2V 0.03V 0.06V 0.03V

(9) (8) (7) (6) (5) (4) (3) (2) (1)

Q785	
	VOLT.
B	0.5V
C	4.6V
E	0V

Q751	
	VOLT.
B	0.03V
C	7.2V
E	0V

Q752	
	VOLT.
B	0.03V
C	0V
E	0V

Q753	
	VOLT.
B	0.03V
C	0.01V
E	0.03V

Q761	
	VOLT.
B	0.8V
C	12V
E	1.6V

Q762	
	VOLT.
B	8.6V
C	12V
E	8V

IC751

0V 12V 2V 0.13V 0.01V 12V 0.06V 0.27V 12V

(1) (2) (3) (4) (5) (6) (7) (8) (9)

IC171

11.5V 5V 0.14V 1.2V 7V 7.4V – 7.5V 15V

(-) (1) (2) (3) (4) (5) (6) (7) (8) (9)

Q181	
	VOLT.
B	0.64V
C	0.14V
E	0V

Q701	
	VOLT.
B	0V
C	5.4V
E	0V

Q721	
	VOLT.
B	4.6V
C	5.2V
E	5.3V

Q731	
	VOLT.
B	0.03V
C	7V
E	0V

Q732	
	VOLT.
B	0.7V
C	0.06V
E	0V

Q733	
	VOLT.
B	0.7V
C	0.03V
E	0V

Q735	
	VOLT.
B	0.2V
C	0.7V
E	0V

Q737	
	VOLT.
B	0.03V
C	0.7V
E	0.01V

Q742	
	VOLT.
B	0.17V
C	12V
E	12V

Q743	
	VOLT.
B	0.02V
C	12V
E	0.04V

Q792	
	VOLT.
B	0V
C	11V
E	0V

IC551

9V	9	8	9V
2.8V	10	7	9V
6V	11	6	2V
12V	12	5	6.3V
2.5V	13	4	4.6V
6V	14	3	6.3V
4.4V	15	2	4.4V
4.4V	16	1	4.4V

Q551	
	VOLT.
B	2.7V
C	6.6V
E	2V

Q561	
	VOLT.
B	4.4V
C	4.7V
E	3.6V

Q562	
	VOLT.
B	4.7V
C	4.7V
E	3.8V

Q311	
	VOLT.
B	8.8V
C	−3V
E	9V

Q312		
	VOLT.	WAVEFORM
B	−2.7V	1.1VP-P
C	−1.5V	1.5VP-P
E	0V	------

Q313		
	VOLT.	WAVEFORM
B	−1.5V	5Vp-p
C	280V	560VP-P
E	0V	------

Q351	
	VOLT.
B	25V
C	25.5V
E	25.5V

Q352	
	VOLT.
B	0.7V
C	0.1V
E	0V

Q353	
	VOLT.
B	7V
C	34V
E	6.5V

Q354	
	VOLT.
B	15V
C	16V
E	16V

Q141	
	VOLT.
B	0V
C	9.3V
E	0.03V

Q142	
	VOLT.
B	0.72V
C	0.05V
E	0.03V

Q143	
	VOLT.
B	4V
C	7.3V
E	3.3V

Q144	
	VOLT.
B	7.3V
C	12V
E	6.6V

IC14

4V 3.6V 3.6V 6.6V 0.05V 0.05V 0.03V

(8) (9) (10) (11) (12) (13) (14)

SERVICE PRECAUTION:
THE AREA ENCLOSED BY THIS LINE (⚠) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE. WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK

COLOUR TELEVISION

SANYO F6-A CHASSIS SERIES

SERVICE REF. NO. **CEM1761F-00**

Part No. 4AA6P200247-- E4VA

22S1

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. COMPONENTS INDICATED BY A MARK ⚠ IN THIS CIRCUIT DIAGRAM SHOW COMPONENTS WHOSE VALUE HAVE SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE PARTS LIST OF SERVICE MANUAL BE USED FOR COMPONENTS REPLACEMENT POINTED OUT BY THE MARK.

CIRCUIT DIAGRAM NOTES:

1. ALL RESISTANCE VALUES ARE IN OHMS. K = 1,000, M = 1,000,000
2. ALL RESISTANCE RATED WATTAGES ARE 1/4W UNLESS OTHERWISE NOTED
3. EXCEPTING ELECTROLYTIC CAPACITORS, ALL CAPACITANCE VALUES OF LESS THAN 1 ARE EXPRESSED IN UF, AND MORE THAN 1 ARE IN PF. ELECTROLYTIC CAPACITANCE VALUES ARE IN UF.
4. ALL CAPACITANCE RATED VOLTAGES ARE 50V UNLESS OTHERWISE NOTED
5. ALL INDUCTANCE VALUES ARE IN UH.
6. VOLTAGE READINGS TAKEN WITH A "VTVM" ARE FROM POINT INDICATED TO CHASSIS GROUND. VOLTAGE READINGS TAKEN BY USING A COLOUR BAR SIGNAL ARE WITH ALL CONTROLS AT NORMAL AND AFC SWITCH IN "OFF" POSITION. SOME VOLTAGES MAY VARY WITH SIGNAL STRENGTH.
7. WAVEFORMS WERE TAKEN WITH COLOUR BAR SIGNAL AND CONTROLS ADJUSTED FOR NORMAL PICTURE. WAVEFORMS WERE TAKEN BY USING A WIDE BAND OSCILLOSCOPE AND A LOW CAPACITY PROBE.
8. VOLTAGE AND WAVEFORM VALUES OF TRANSISTORS IN THE AREA ENCLOSED BY LINE (- - -) ARE MEASURED TO BASE THE ELECTRIC POTENTIAL AT PIN 3 OF T311.
9. THIS CIRCUIT DIAGRAM COVERS A BASIC OR REPRESENTATIVE CHASSIS ONLY. THERE MAY BE SOME COMPONENTS OR PARTIAL CIRCUIT DIFFERENCES BETWEEN THE ACTUAL CHASSIS AND THE CIRCUIT DIAGRAM.

10 EXPRESSION OF CAPACITANCE AND RESISTANCE IN CIRCUIT DIAGRAM

CAPACITANCE (Example)

1000 C M 2200 D

- Characteristic
- Capacitance value (2200pF)
- Allowable error (±20%)
  - J ... ±5%
  - K ... ±10%
  - M ... ±20%
- Kind (Ceramic) / Rated voltage (1000V)
  - T, A, E, U, D ... Elec
  - C, K, B ... Cera
  - F ... Myla
  - M, N ... Poly
  - Z ... Meta

RESISTANCE (Example)

1/2 N J 1/2

- Resistance value (1.2Ω)
- Allowable error (±5%)
- Kind (Metalized carbon) / Rated Wattage (1/2W)
  - D ... Carb
  - N ... Meta
  - S ... Oxid
  - W ... Wire
  - C ... Solid

Q181	
	VOLT.
B	0.64V
C	0.14V
E	0V

Q818	
	VOLT.
B	0.08V
C	12V
E	0.03V

Q819	
	VOLT.
B	6.5V
C	12V
E	6V

Q811	
	VOLT.
B	0.03V
C	12V
E	0.03V

Q812	
	VOLT
B	3.6V
C	12V
E	3V

Q813	
	VOLT.
B	5.5V
C	12V
E	5V

Q815	
	VOLT.
B	5V
C	0.03V
E	5.6V

Q816	
	VOLT.
B	5.8V
C	1V
E	6.4V

Q817	
	VOLT.
B	0.01V
C	0.03V
E	0.04V

Q1301	
	VOLT.
B	1.8V
C	12V
E	1.2V

Q1341	
	VOLT.
B	2.6V
C	6.2V
E	2.2V

Q1357	
	VOLT.
B	0.7V
C	0.04V
E	0.03V

Q1303	
	VOLT.
B	−0.2V
C	12V
E	0.03V

Q641	
	VOLT.
B	0.01V
C	87V
E	0.03V

Q123	
	VOLT.
B	3.3V
C	0.03V
E	4V

Q124	
	VOLT.
B	2V
C	0V
E	2.8V

Q145	
	VOLT.
B	7.2V
C	0.03V
E	6.7V

Q146	
	VOLT.
B	3.4V
C	12V
E	7V

Q147	
	VOLT.
B	0.6V
C	7V
E	7V

Q148	
	VOLT.
B	13V
C	11.4V
E	12V

Q149	
	VOLT.
B	11.4V
C	10.3V
E	12V

Q150	
	VOLT.
B	0.03V
C	7V
E	0.03V

Q110	
	VOLT.
B	10V
C	12V
E	9V

Q101	
	VOLT.
B	1.2V
C	0.4V
E	4.2V

Q401		
	VOLT.	WAVEFORM
B	7.2V	4.2VP-P HORIZ
C	86V	100VP-P HORIZ
E	6.8V	-----

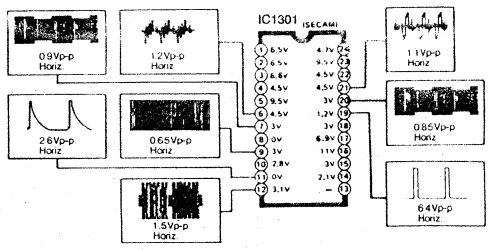
Q611		
	VOLT.	WAVEFORM
B	7.2V	4.2VP-P HORIZ
C	94V	100VP-P HORIZ.
E	6.8V	-----

Q421		
	VOLT.	WAVEFORM
B	7V	3.7VP-P HORIZ
C	87V	95VP-P HORIZ.
E	6.7V	-----

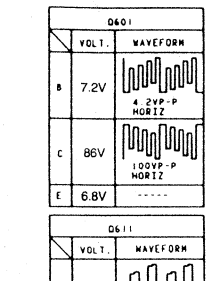
Q431		
	VOLT	WAVEFORM
B	0.68V	2.1VP-P HORIZ.
C	15V	40VP-P HORIZ.
E	0V	------

Q432		
	VOLT	WAVEFORM
B	2.3V	1.4VP-P HORIZ
C	80V	100VP-P HORIZ
E	2.4V	1.2VP-P HORIZ

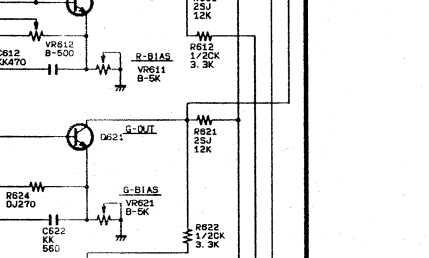
IC1301 (SECAM)



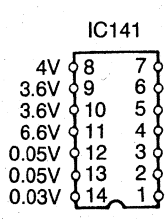
IC101



IC451



IC141



IC1301 AN5635N

IC1811 AN5352

IC451 LA7837

IC1812 4066

IC812 4066

SECAM PCB ASSY E4WA UE2424

CRT PCB ASSY E3FA UE2415

KW KS KL KM KN KO KP KQ KFO KSC K130 K13M K13T K6P K6M K6Q K6D K601 EK070B <CRT SOCKET>

SERVICE NOR SER SW251 ES0160

SW451 ES0160

V-SIZE VR451 B-50K

SUB-BRIGHT VR211 B-50K

VIDEO PHASE VR411 B-20K

B-BIAS VR601 B-5K VR611 B-5K VR621 B-5K VR612 B-500 VR602 B-500

G-BIAS VR621 B-5K

AV AF TV AF

VIDEO SYNC AJ2 AJ3

HORIZ DRIVE H-DRIVE TRANS HORIZ. OUTPUT

FBT T471 FDA011

L902 DYD150XFB

W902 JG0149A JG0100

G901 A41EAM01X01

TP-68 TP-6A TP-6E TP-6B TP-6C TP-6D TP-6F TP-6G TP-6H TP-13D TP-13C TP-13B TP-13E TP-13A TP-F TP-G

Z201 1P03239

EK0135 EK13928 EK1539

EQA03-11A EQA02-05 (D.E) EQA02-06B EQA02-10 (A.B)

1SS176 1SS1555 1S1555 1S1553 1S2473 1S2076 DS442 1S1834 ;ED0448 ED0446

2SC5536 2SA608 2SA606 2SC2412 2SC2812 2SA1015 (O.Y) 2SA933 (Q.R) 2SC1740S (Q.R.S) 2SC945A (Q.R.P) 2SC1815 (G.O.Y) 2SC2229(O.Y) 2SC2228(O.E) ;2SC2229(O.Y) 2SC2274(E.F) 2SD1649 2SA1015 (O.Y)

EX0179XT ;F30014 BT EX0314X0 EB313 EB328 EB314 ZZ0008 AD0001A ;AD0001 ZZ0008 ZZ073 ZZ0008 YM0081SXA

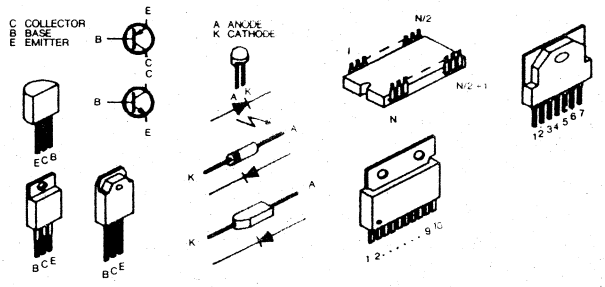
DYD150XFB AA0035 AC0013 ;AC0013B TVR1G

T1301 ST0016XC T1302 SL0007XC T1303 SL0007XC T1304 SL0007XC T121 SL0005XV T131 ST0084AV ;ST0084XV T471 FDA011

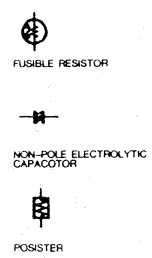
L441 AC0013 ;AC0013B

1. DIODE IS1555 MAY BE REPLACED WITH IS2473, IS2076 OR DS442 UNLESS OTHERWISE NOTED.
TRANSISTOR 2SC536 (E, F, G) MAY BE REPLACED WITH 2SC1740S (Q, R, S), 2SC1740 (Q, R, S), 2SC945A (Q, R, P) OR 2SC1815 (G, O, Y) UNLESS OTHERWISE NOTED
TRANSISTOR 2SA608 (E, F) MAY BE REPLACED WITH 2SA933 (Q, R), 2SA564 (QA, RA) OR 2SA1015 (O, Y) UNLESS OTHERWISE NOTED

TRANSISTOR, DIODE & INTEGRATED CIRCUIT TERMINAL GUIDE



PARTICULAR PARTS SYMBOL



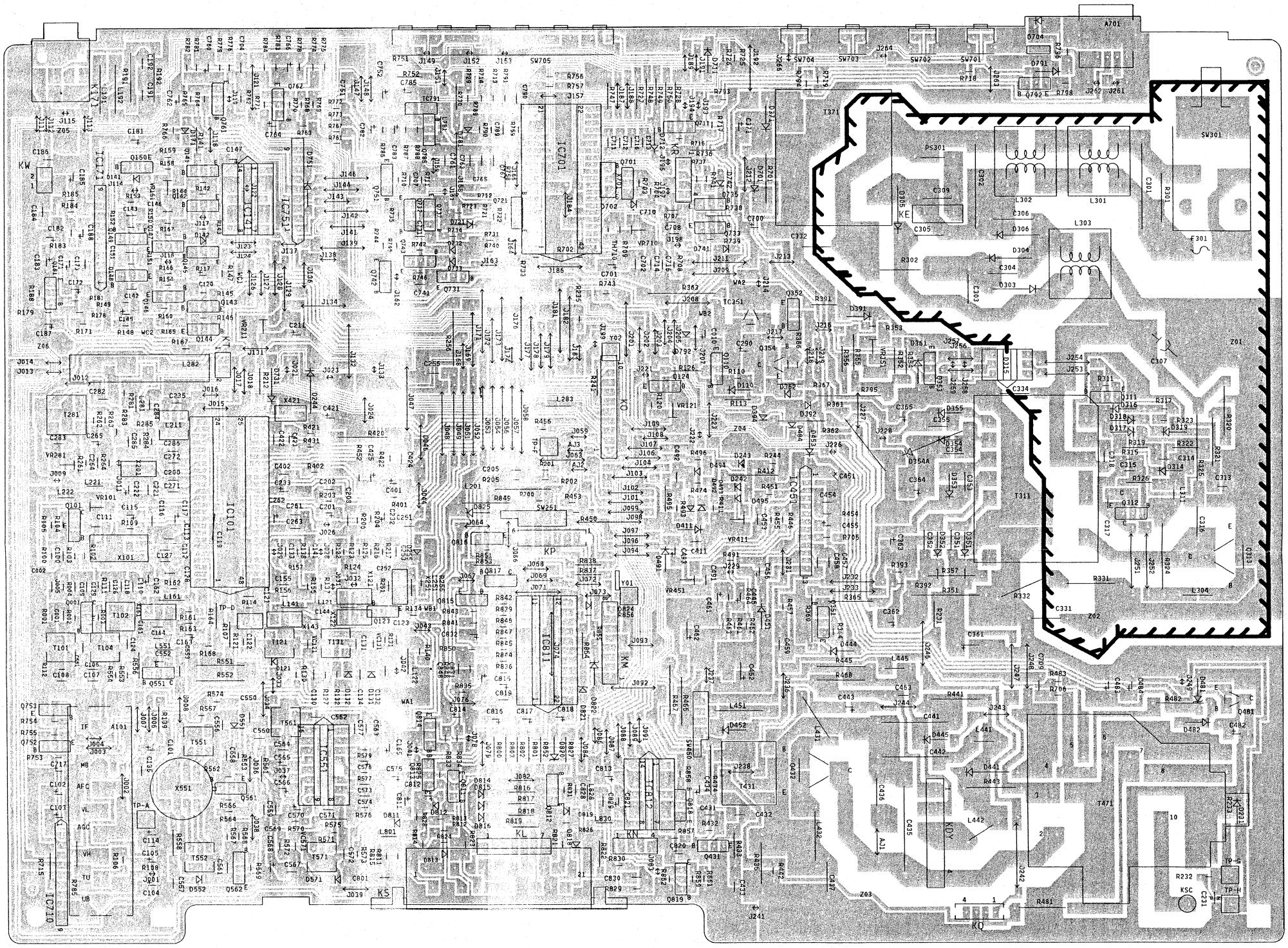
DIAGRAM

J . . . . . ±5%
K . . . . . ±10%
M . . . . . ±20%

T, A, E, U, D Electrolytic
C, K, B . . . . Ceramic
F . . . . . Mylar film
M, N . . . . . Polypropylene
Z . . . . . Metalized paper

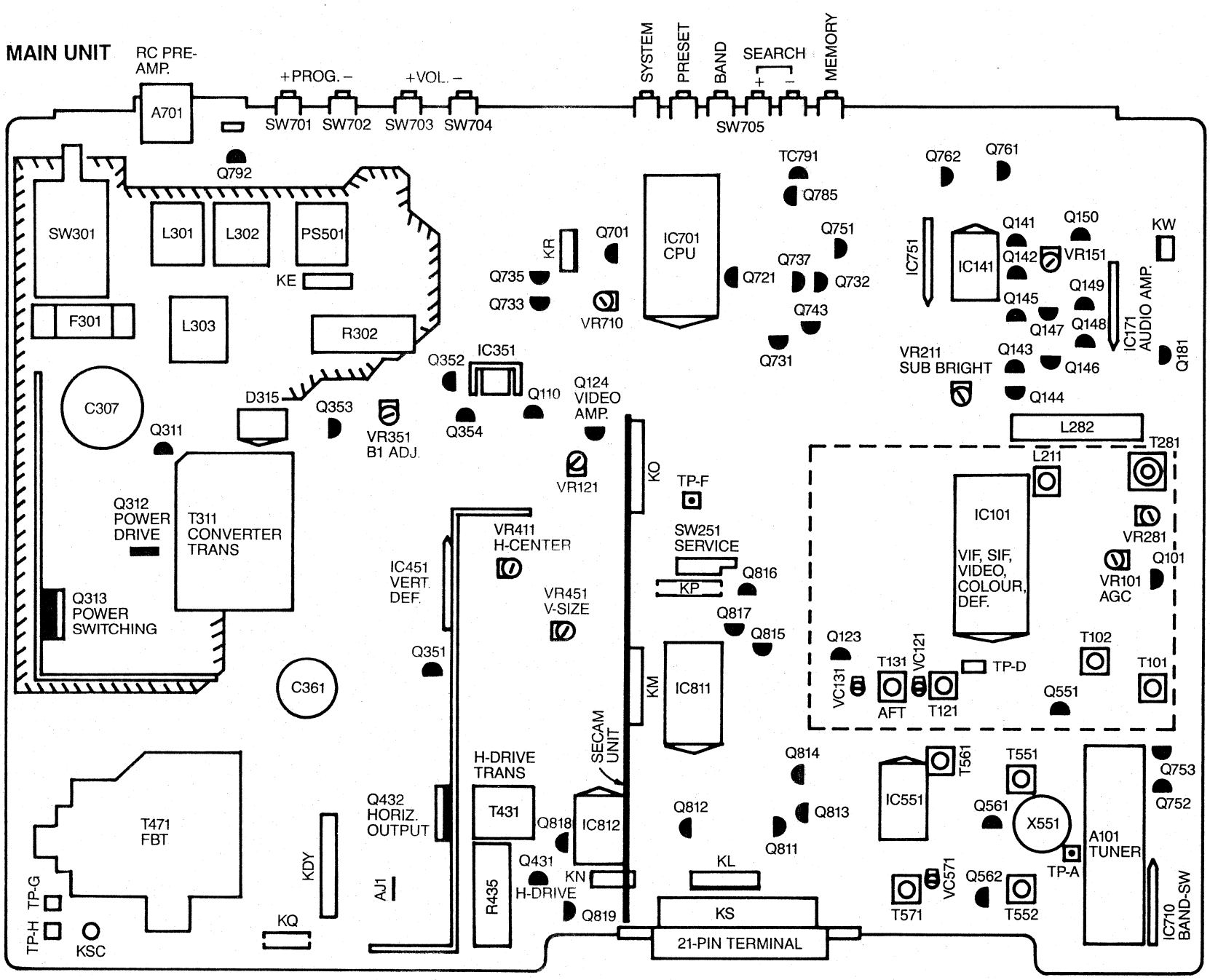
D . . . . . Carbon
N . . . . . Metalized carbon
S . . . . . Oxide metalized
W . . . . . Wire wounding
C . . . . . Solid

MAIN BOARD (CIRCUIT SIDE)

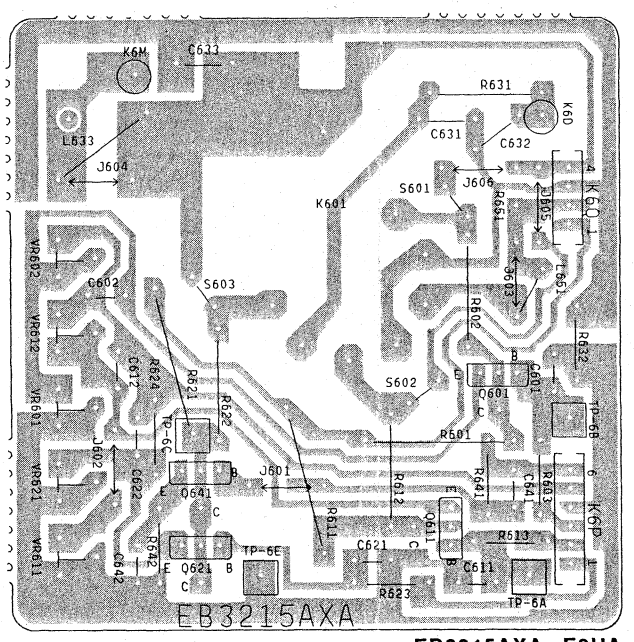


4AA4B10201-- E3FA

COMPONENT LOCATION

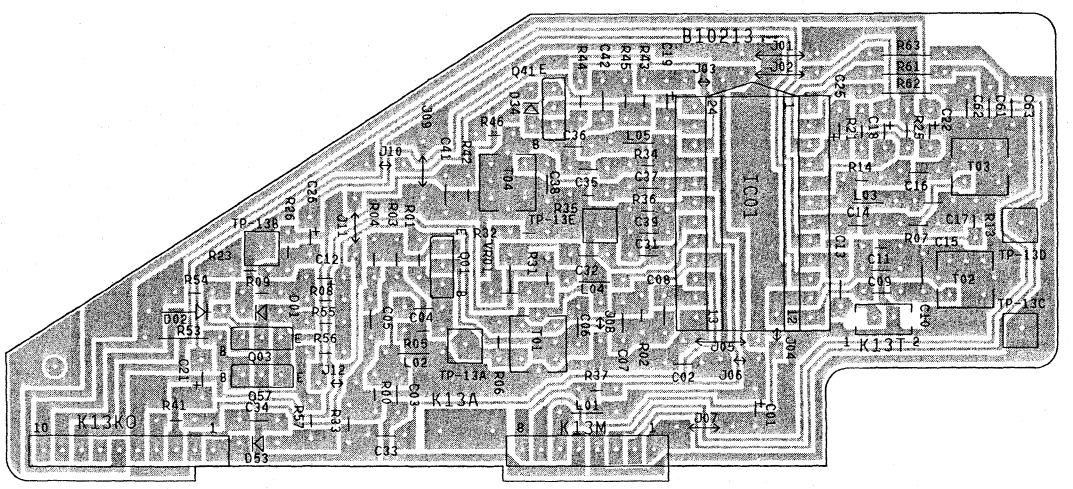


CRT BOARD (CIRCUIT SIDE)



EB3215AXA E2HA

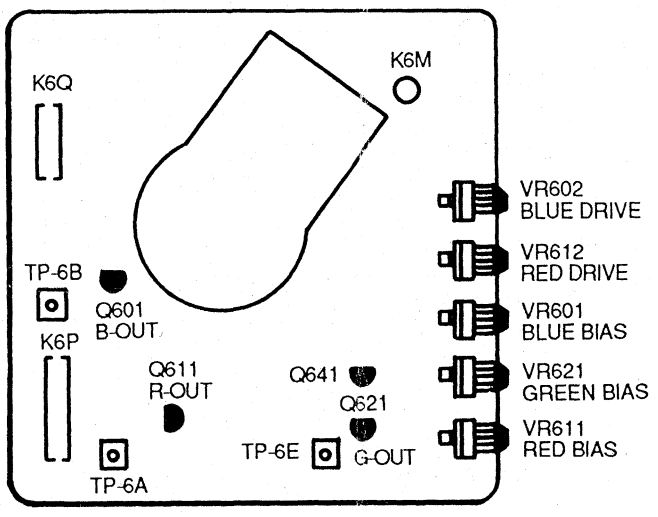
SECAM BOARD (CIRCUIT SIDE)



4AA4B10213AXA E3FA

E3FA

CRT UNIT



E4VA

IC701

ON-SCREEN BLANKING OUTPUT	1	OUT (0.1V)	Vcc (5V)	42	+5 volts Supply
ON-SCREEN (NOT USED) DISPLAY OUTPUT	2	B	OSC2 (0.4V)	41	ON-SCREEN DISPLAY OSCILLATOR(5MHZ)
ON-SCREEN BLANKING OUTPUT	3	G (0.03V)	OSC1 (0.5V)	40	
	4	R	Hsync (4.5V)	39	ON-SCREEN DISPLAY(ACTIVE:LOW) HORIZONTAL SYNCHRONISATION PULSE.
TV/AV MODE OUTPUT (H:TV L:AV MODE)	5	P4 (5V)	Vsync (5.4V)	38	ON-SCREEN DISPLAY(ACTIVE:LOW) VERTICAL SYNCHRONISATION PULSE.
	6	P62 (5.4V)	P21	37	TEXT CONTROL (DATA OUTPUT)
RESET INPUT (ACTIVE:LOW)	7	RESET (5.4V)	P20	36	TEXT CONTROL (CLOCK OUTPUT)
AFT SIGNAL INPUT (NOT USED)	8	P51 (1.5V)	X OUT (2.4V)	35	SYSTEM CLOCK OSCILLATOR (4MHZ)
TIME BASE INPUT	9	P50 (4.4V)	X IN (2.3V)	34	
VOLUME CONTROL OUTPUT(ACTIVE:HIGH)	10	VDP0 (0.2V)	P61 (2.9V)	33	SKEW OUT PUT (H:OFF,L:ON)
COLOUR CONTROL OUTPUT(ACTIVE:HIGH)	11	VDP1 (4.7V)	P12 (2V)	32	BAND OUTPUT
BRIGHTNESS CONTROL OUTPUT(ACTIVE:HIGH)	12	VDP2 (4.4V)	P11 (0V)	31	
CONTRAST CONTROL OUTPUT(ACTIVE:HIGH)	13	VDP3 (10.3V)	P10 (5.5V)	30	
REMOTE CONTROL INPUT(ACTIVE:LOW)	14	P53 (5.4V)	P03 (0V)	29	KEY SCAN & SYSTEM CHANGE OUTPUT
OVER LOAD DETECT (L:WRONG)	15	P60 (5.4V)	P02 (0V)	28	
AFT ON/OFF (H:OFF, L:ON)	16	P70 (0V)	P01 (0V)	27	KEY SCAN OUTPUT (ACTIVE:LOW)
POWER ON/OFF (H:OFF, L:ON)	17	P71 (0V)	P00 (0V)	26	
	18	P72 (0V)	P33 (5.4V)	25	
GND	19	TEST (0V)	P32 (0.6V)	24	KEY SCAN INPUT (ACTIVE:LOW)
TUNING VOLTAGE OUTPUT	20	D/A (4V)	P31 (5.4V)	23	
GND	21	Vss (0V)	P30 (5.4V)	22	

IC710

12V 3V 12V 13.5V 0.03V 2V 0.03V 0.06V 0.03V

(9) (8) (7) (6) (5) (4) (3) (2) (1)

Q785	
	VOLT.
B	0.5V
C	4.6V
E	0V

Q751	
	VOLT.
B	0.03V
C	7.2V
E	0V

Q752	
	VOLT.
B	0.03V
C	0V
E	0V

Q753	
	VOLT.
B	0.03V
C	0.01V
E	0.03V

Q761	
	VOLT.
B	0.8V
C	12V
E	1.6V

Q762	
	VOLT.
B	8.6V
C	12V
E	8V

IC751

0V 12V 2V 0.13V 0.01V 12V 0.06V 0.27V 12V

(1) (2) (3) (4) (5) (6) (7) (8) (9)

IC171

11.5V 5V 0.14V 1.2V 7V 7.4V – 7.5V 15V

(1) (2) (3) (4) (5) (6) (7) (8) (9)

Q181	
	VOLT.
B	0.64V
C	0.14V
E	0V

Q701	
	VOLT.
B	0V
C	5.4V
E	0V

Q721	
	VOLT.
B	4.6V
C	5.2V
E	5.3V

Q731	
	VOLT.
B	0.03V
C	7V
E	0V

Q732	
	VOLT.
B	0.7V
C	0.06V
E	0V

Q733	
	VOLT.
B	0.7V
C	0.03V
E	0V

Q735	
	VOLT.
B	0.2V
C	0.7V
E	0V

Q737	
	VOLT.
B	0.03V
C	0.7V
E	0.01V

Q742	
	VOLT.
B	0.17V
C	12V
E	12V

Q743	
	VOLT.
B	0.02V
C	12V
E	0.04V

Q792	
	VOLT.
B	0V
C	11V
E	0V

IC551

9V (9) (8) 9V
2.8V (10) (7) 9V
6V (11) (6) 2V
12V (12) (5) 6.3V
2.5V (13) (4) 4.6V
6V (14) (3) 6.3V
4.4V (15) (2) 4.4V
4.4V (16) (1) 4.4V

Q551	
	VOLT.
B	2.7V
C	6.6V
E	2V

Q561	
	VOLT.
B	4.4V
C	4.7V
E	3.6V

Q562	
	VOLT.
B	4.6V
C	4.7V
E	3.8V

Q311	
	VOLT.
B	8.8V
C	−3V
E	9V

Q312		
	VOLT.	WAVEFORM
B	-2.7V	1.1VP-P
C	-1.5V	1.5VP-P
E	0V	------

Q313		
	VOLT.	WAVEFORM
B	-1.5V	5Vp-p
C	28.0V	560VP-P
E	0V	------

Q351	
	VOLT.
B	25V
C	25.5V
E	25.5V

Q352	
	VOLT.
B	0.7V
C	0.1V
E	0V

Q353	
	VOLT.
B	7V
C	34V
E	6.5V

Q354	
	VOLT.
B	15V
C	16V
E	16V

Q141	
	VOLT.
B	0V
C	9.3V
E	0.03V

Q142	
	VOLT.
B	0.72V
C	0.05V
E	0.03V

Q143	
	VOLT.
B	4V
C	7.3V
E	3.3V

Q144	
	VOLT.
B	7.3V
C	12V
E	6.6V

IC14

4V (8)
3.6V (9)
3.6V (10)
6.6V (11)
0.05V (12)
0.05V (13)
0.03V (14)

SERVICE PRECAUTION

THE AREA ENCLOSED BY THIS LINE (▬▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE. WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

SANYO

COLOUR TELEVISION

F6-A CHASSIS SERIES

SERVICE REF. NO. **CEM2151F-00**
CEM2161F-00

Part No. 4AA6P200246-- E4WA

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. COMPONENTS INDICATED BY A MARK ⚠ IN THIS CIRCUIT DIAGRAM SHOW COMPONENTS WHOSE VALUE HAVE SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE PARTS LIST OF SERVICE MANUAL BE USED FOR COMPONENTS REPLACEMENT POINTED OUT BY THE MARK.

CIRCUIT DIAGRAM NOTES:

1 ALL RESISTANCE VALUES ARE IN OHMS, K = 1,000, M = 1,000,000.
2 ALL RESISTANCE RATED WATTAGES ARE 1/4W UNLESS OTHERWISE NOTED.
3 EXCEPTING ELECTROLYTIC CAPACITORS, ALL CAPACITANCE VALUES OF LESS THAN 1 ARE EXPRESSED IN UF, AND MORE THAN 1 ARE IN PF.
ELECTROLYTIC CAPACITANCE VALUES ARE IN UF.
4 ALL CAPACITANCE RATED VOLTAGES ARE 50V UNLESS OTHERWISE NOTED.
5 ALL INDUCTANCE VALUES ARE IN UH.
6 VOLTAGE READINGS TAKEN WITH A "VTVM" ARE FROM POINT INDICATED TO CHASSIS GROUND. VOLTAGE READINGS TAKEN BY USING A COLOUR BAR SIGNAL ARE WITH ALL CONTROLS AT NORMAL AND AFC SWITCH IN "OFF" POSITION. SOME VOLTAGES MAY VARY WITH SIGNAL STRENGTH.
7 WAVEFORMS WERE TAKEN WITH COLOUR BAR SIGNAL AND CONTROLS ADJUSTED FOR NORMAL PICTURE. WAVEFORMS WERE TAKEN BY USING A WIDE BAND OSCILLOSCOPE AND A LOW CAPACITY PROBE.
8 VOLTAGE AND WAVEFORM VALUES OF TRANSISTORS IN THE AREA ENCLOSED BY LINE (- - -) ARE MEASURED TO BASE THE ELECTRIC POTENTIAL AT PIN 3 OF T311.
9 THIS CIRCUIT DIAGRAM COVERS A BASIC OR REPRESENTATIVE CHASSIS ONLY. THERE MAY BE SOME COMPONENTS OR PARTIAL CIRCUIT DIFFERENCES BETWEEN THE ACTUAL CHASSIS AND THE CIRCUIT DIAGRAM.

10 EXPRESSION OF CAPACITANCE AND RESISTANCE IN CIRCUIT DIAGRAM

CAPACITANCE (Example)
1000 C M 2200 D
- Characteristic
- Capacitance value (2200pF)
- Allowable error (±20%)
- Kind (Ceramic)
- Rated voltage (1000V)

RESISTANCE (Example)
1/2 N J 1/2
- Resistance value (1.2Ω)
- Allowable error (±5%)
- Kind (Metalized carbon)
- Rated Wattage (1/2W)

Q181	
	VOLT.
B	0.64V
C	0.14V
E	0V

Q818	
	VOLT.
B	0.08V
C	12V
E	0.03V

Q819	
	VOLT.
B	6.5V
C	12V
E	6V

IC812

0.46V	1	14	12V
5.5V	2	13	0.08V
5.5V	3	12	0.08V
5.5V	4	11	1V
12V	5	10	6.5V
12V	6	9	6.5V
0.03V	7	8	6.5V

IC881

12V	1	22	3.4V
1.2V	2	21	7.2V
0.4V	3	20	7.2V
0.3V	4	19	3.4V
0.04V	5	18	7V
−0.06V	6	17	7V
5.3V	7	16	3.4V
5.3V	8	15	7.2V
7V	9	14	7.2V
5.7V	10	13	0.03V
5.7V	11	12	0.04V

Q811	
	VOLT.
B	0.03V
C	12V
E	0.03V

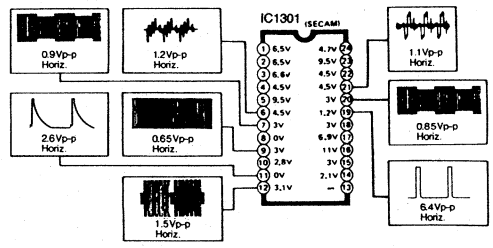
Q812	
	VOLT.
B	3.6V
C	12V
E	3V

Q813	
	VOLT.
B	5.5V
C	12V
E	5V

Q815	
	VOLT.
B	5V
C	0.03V
E	5.6V

Q816	
	VOLT.
B	5.8V
C	1V
E	6.4V

Q817	
	VOLT.
B	0.01V
C	0.03V
E	0.04V



Q1301	
	VOLT.
B	1.8V
C	12V
E	1.2V

Q1341	
	VOLT.
B	2.6V
C	6.2V
E	2.2V

Q1357	
	VOLT.
B	0.7V
C	0.04V
E	0.03V

Q1303	
	VOLT.
B	−0.2V
C	12V
E	0.03V

Q641	
	VOLT.
B	0.01V
C	100V
E	0.03V

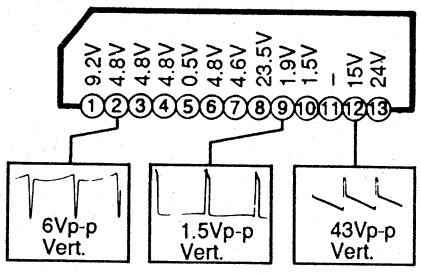
Q123	
	VOLT.
B	3.3V
C	0.03V
E	4V

Q124	
	VOLT.
B	2V
C	0V
E	2.8V

IC101

1	3.6V	5V	48
2	6V	5V	47
3	4.6V	4V	46
4	5.8V	5V	45
5	4V	5.4V	44
6	–	7.2V	43
7	4.8V	3.5V	42
8	4.8V	6.2V	41
9	6V	4.8V	40
10	7V	5.6V	39
11	9.3V	1.8V	38
12	6.7V	8.6V	37
13	9.2V	2.8V	36
14	5.7V	4.4V	35
15	7V	–	34
16	5.8V	7V	33
17	6.2V	4.8V	32
18	3.4V	0.4V	31
19	4.8V	7.4V	30
20	3.5V	5.8V	29
21	5.5V	5.2V	28
22	5.5V	0.8V	27
23	5.5V	0.6V	26
24	4.5V	7.7V	25

IC451



Q601	VOLT.	WAVEFORM
B	6.6V	4.2VP-P HORIZ.
C	104V	100VP-P HORIZ
E	6.4V	-----

Q611	VOLT.	WAVEFORM
B	6.6V	4.2VP-P HORIZ
C	103V	100VP-P HORIZ.
E	6.4V	-----

Q621	VOLT.	WAVEFORM
B	6.6V	3.7VP-P HORIZ
C	100V	95VP-P HORIZ.
E	6.4V	-----

Q431	VOLT.	WAVEFORM
B	0.08V	2.1VP-P HORIZ.
C	19V	40VP-P HORIZ.
E	0V	------

Q432	VOLT	WAVEFORM
B	2.3V	1.4VP-P HORIZ
C	80V	100VP-P HORIZ
E	2.4V	1.2VP-P HORIZ

IC141

4V	8	7	12V
3.6V	9	6	9.3V
3.6V	10	5	9.3V
6.6V	11	4	5.5V
0.05V	12	3	5.5V
0.05V	13	2	5.5V
0.03V	14	1	6V

Q145	
	VOLT.
B	7.2V
C	0.03V
E	6.7V

Q146	
	VOLT.
B	3.4V
C	12V
E	7V

Q147	
	VOLT.
B	0.6V
C	7V
E	7V

Q148	
	VOLT.
B	13V
C	11.4V
E	12V

Q149	
	VOLT.
B	11.4V
C	10.3V
E	12V

Q150	
	VOLT.
B	0.03V
C	7V
E	0.03V

Q110	
	VOLT.
B	10V
C	12V
E	9V

Q101	
	VOLT.
B	1.2V
C	0.4V
E	4.2V

N CIRCUIT DIAGRAM

e (2200pF) ┌J . . . . . ±5%
±20%)─┤K . . . . . ±10%
└M . . . . . ±20%

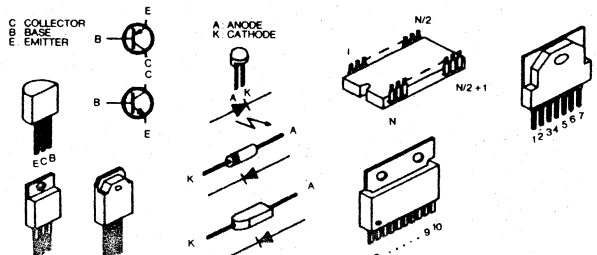
┌T, A, E, U, D Electrolytic
├C, K, B . . . . Ceramic
├F . . . . . Mylar film
├M, N . . . . . Polypropylene
└Z . . . . . Metalized paper

(1.2Ω)
±5%)

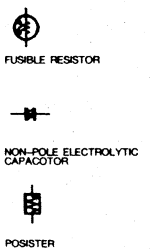
carbon)─┌D . . . . . Carbon
/2W) ├N . . . . . Metalized carbon
└S . . . . . Oxide metalized

11. DIODE IS1555 MAY BE REPLACED WITH IS2473, IS2076 OR DS442 UNLESS OTHERWISE NOTED.
TRANSISTOR 2SC536 (E, F, G) MAY BE REPLACED WITH 2SC1740S (Q, R, S), 2SC1740 (Q, R, S), 2SC945A (Q, R, P) OR 2SC1815 (G, O, Y) UNLESS OTHERWISE NOTED.
TRANSISTOR 2SA608 (E, F) MAY BE REPLACED WITH 2SA933 (Q, R), 2SA564 (QA, RA) OR 2SA1015 (O, Y) UNLESS OTHERWISE NOTED

TRANSISTOR, DIODE & INTEGRATED CIRCUIT TERMINAL GUIDE



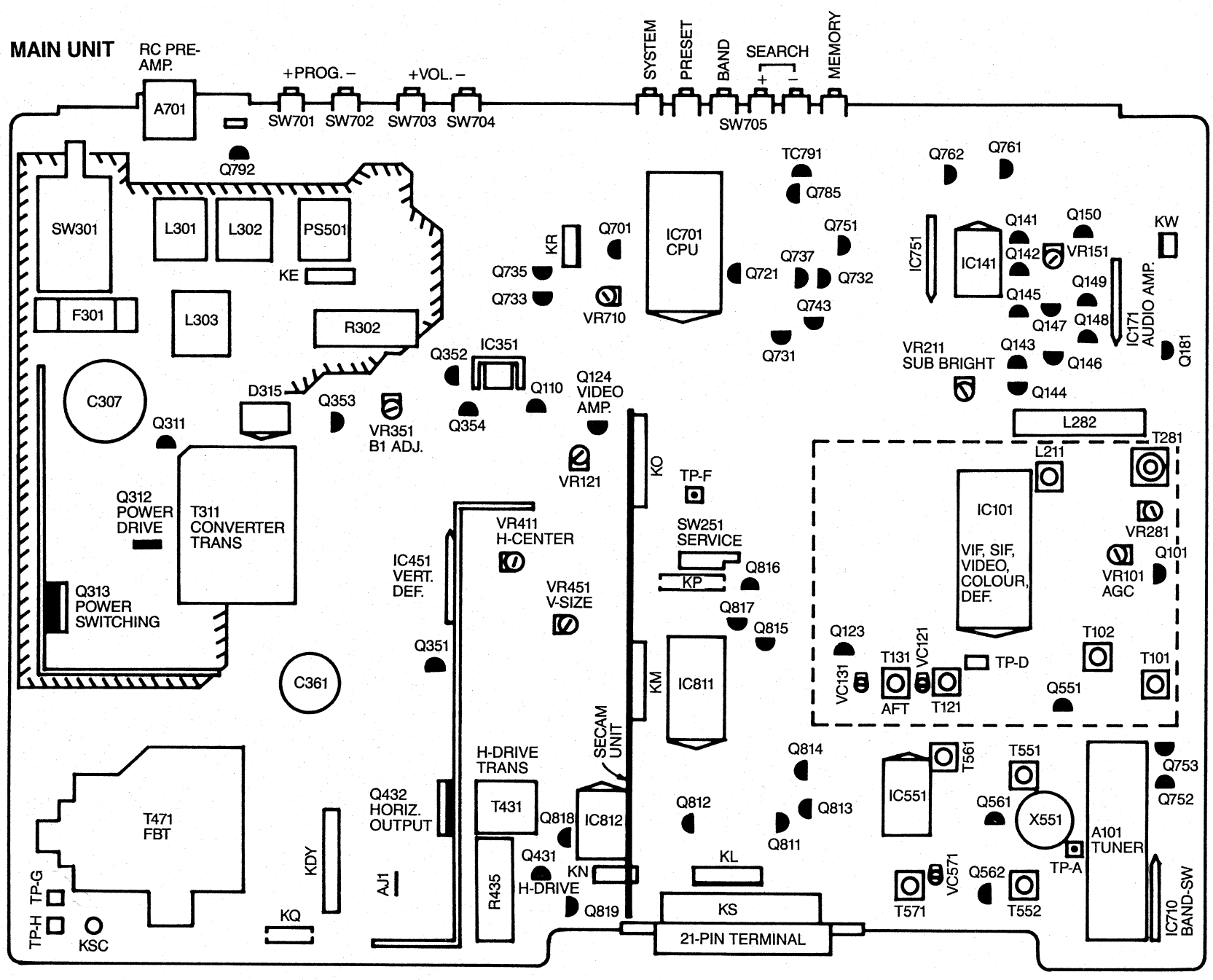
PARTICULAR PARTS SYMBOL



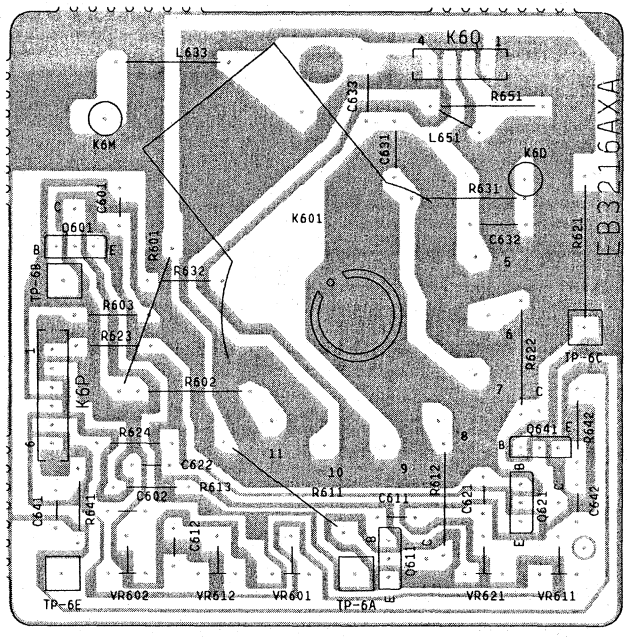
MAIN BOARD (CIRCUIT SIDE)

4AA4B10201-- E3FA

COMPONENT LOCATION

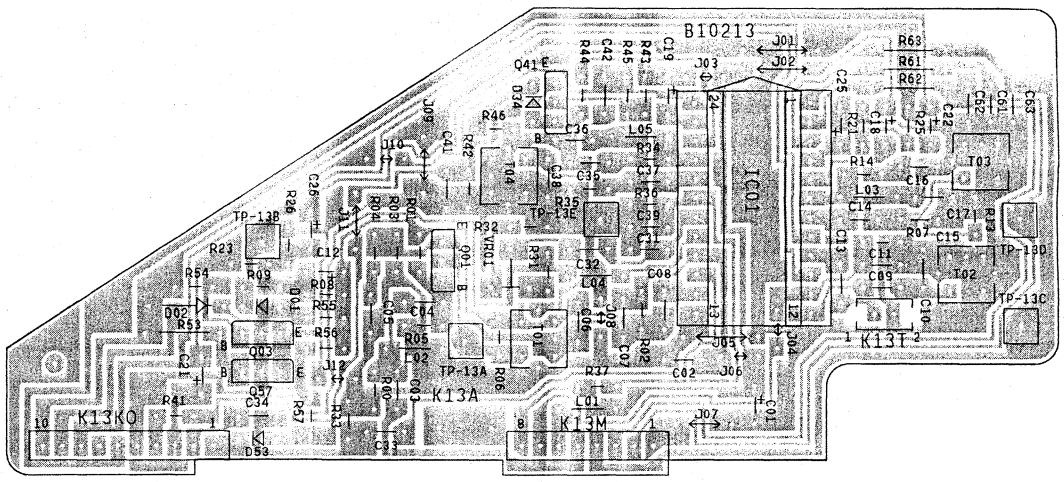


CRT BOARD (CIRCUIT SIDE)



EB3216AXA E2KA

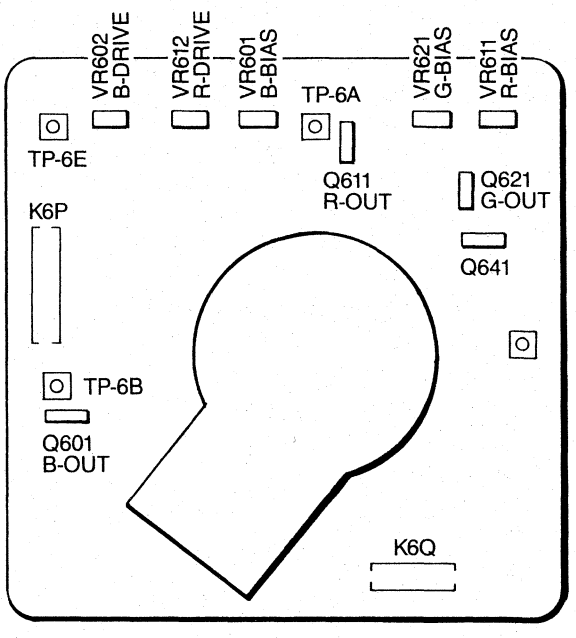
SECAM BOARD (CIRCUIT SIDE)



4AA4B10213AXA E3FA

E3FA

CRT UNIT



E4WA